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THE SOUNDS OF THE
FRENCH LANGUAGE

BY PAUL PASSY

TRANSLATED BY

D.L. SAVORY & D. JONES

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THE SOUNDS OF THE FRENCH LANGUAGE

**THEIR FORMATION, COMBINATION
AND REPRESENTATION**

BY

PAUL PASSY

DOCTEUR-ÈS-LETTRES

DIRECTEUR-ADJOINT A L'ÉCOLE DES HAUTES ÉTUDES, PARIS

TRANSLATED BY

D. L. SAVORY, M.A.

LECTURER AT GOLDSMITHS' COLLEGE, UNIVERSITY OF LONDON

LATE ASSISTANT MASTER AT MARLBOROUGH COLLEGE

AND

D. JONES, M.A.

LECTURER ON PHONETICS AT UNIVERSITY COLLEGE

LONDON

ASSISTANT EDITOR OF THE 'MAÎTRE PHONÉTIQUE'

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PREFACE

THE responsibility of issuing an English edition of my *Sons du Français* rests with Mr. Savory, who has invited Mr. Jones to collaborate in carrying out the project. Personally, I should as soon have thought of carrying water to the river as of publishing a work on phonetics in the country of Ellis and Sweet, but I shall be only too glad if, as Mr. Savory confidently anticipates, the book meets with a warm welcome both in England and America.

I wish it to be clearly understood, however, that this is an elementary work, intended for teachers and advanced students of French; it is not a scientific treatise for phonetic specialists. These last, should they read it, would find little to interest them. The book contains no new theories, no important discoveries, hardly anything that is not generally known and received. At the same time it is, of course, written on rigorously scientific lines; all facts mentioned have been carefully verified by myself, unless the contrary is expressly stated, and in the latter case nothing has been accepted save on the best authority.

Perhaps, indeed, the success of this little book—which has passed through six French editions in twenty years—is altogether owing to this fact, that it is emphatically a popular work on scientific lines, being, as it is, written

by one who is at the same time a veteran teacher and a phonetic specialist.

I may add that the present edition is not a mere translation. Many hints have been added, intended specially to meet the difficulties of English students; and besides this there have been a good many alterations and additions on secondary points. Messrs. Savory and Jones are both of them eager phoneticians, and they have often suggested changes, which in several cases I have accepted as improvements. So that this may be considered, to all intents and purposes, as a seventh edition of my work.

I can only hope that it may meet with the approval of English-speaking students of French, and help to make my mother tongue more accessible to our neighbours across the Channel.

PAUL PASSY.

May, 1907.

We take this opportunity of thanking Dr. W. Loudon Strain for several criticisms and suggestions on the sections describing the organs of speech, Mr. Ivor B. John and Dr. Herbert Smith for kindly reading through the proofs, and Messrs. Sampson Low, Marston & Co. for allowing us to reproduce some of the illustrations from *Voice, Song, and Speech*, by Lennox Browne and Emil Behnke.

D. L. S.

D. J.

TABLE OF SOUNDS

	Glottal	Uvular	Velar	Palatal	Dental	Labial
Plosive			k g		t d	p b
Nasal				n	n	m
Lateral					l	
Rolled		ʀ			r	
Fricative	h	ʁ	(w)	(ɥ) j	ʃ ʒ sz	ʦ ʣ f v w
Closed			u	y i		(y) (u)
Half-closed			o	ə ø e		(ø) (o)
Half-open			ɔ ɔ̃	œ œ ɛ ɛ̃		(œ) (o)
Open			ɑ ɶ	a		
VOWELS						
CONSONANTS						

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FIG. 5. The glottis, seen from above.

FIG. 6. The mouth.

FIG. 7. Larynx as seen through the laryngo-
scope, showing: A. Gentle breathing.
B. Deep breathing. C. Production
of voice.

*Between
pages 6 and 7*

FIRST PART

PRELIMINARY IDEAS

SOUNDS IN GENERAL

1. EVERY one knows, though perhaps he may not be able to express clearly, what he means by a *sound*. It is something which is heard, or perceived by the ear.

The science of acoustics tells us that sound is produced by rapid vibrations of an elastic body, which are transmitted as *sound-waves* through the air or some other medium. When the sound-waves reach our ear they act in a certain manner upon the *auditory nerves* and produce the impression of sound.

2. We know too that a sound can be more or less *loud* or *soft*, *high* or *low*. The loudness of a sound depends on the amplitude of the vibrations and of the sound-waves produced by them¹; the greater the amplitude of the vibrations, the louder is the sound.

The pitch depends on the rapidity of the vibrations; the greater their rapidity, the higher is the sound.

SOUNDS AND NOISES

3. Again, the least trained observer can distinguish between *musical sounds* and *noises*. Compare a note struck on the piano with the scraping sound made by a saw; there is evidently a fundamental difference, although one might be

¹ The *amplitude* of vibrations is the distance through which the vibrating particles oscillate.

somewhat puzzled to say exactly in what it consists. There may even be doubtful sounds which one would hesitate to class either as musical sounds or as noises; but one feels instinctively that there is a fundamental difference. The science of acoustics will tell us what is the basis of it.

4. An elastic body may oscillate quite regularly; in this case the vibrations give what is called a *simple sound*; this is the case in tuning-forks. More often, however, the vibrations are more or less irregular and combined in various ways; this gives a *compound sound*, as in musical instruments and the human voice.

5. A compound sound consists of a series of simple sounds, each possessing a definite pitch, that is to say each produced by vibrations of a given rapidity. The lowest of these sounds, which is also generally the loudest, is called the *fundamental sound*; the others are *accessory sounds*.

6. Any ratios may exist between the number of vibrations of the fundamental sound and that of the accessory sounds. There may be among others a simple ratio, that is to say that the vibrational numbers may be proportional to the numbers 1, 2, 3, 4, 5 . . . , &c. In this case, if the lowest simple sound has for instance 132 vibrations per second, the second has 264, the third 396, &c. This is expressed in musical language by saying that if the lowest sound is the *c* of the bass octave, the others are *c'*, *g'*, *c''*, *e''*, *g''*, &c. (according to the usual notation). This may be represented as follows:—



When this is the case, we say that the accessory sounds are the *harmonics* of the fundamental sound. It is then and only then that the compound sound is a *musical sound*. When the accessory sounds are not harmonics of the funda-

mental sound, we have no longer a musical sound but simply a *noise*.

7. It is the fundamental sound which determines the pitch of a compound musical sound, or which *gives the note*. It is the presence of the accessory sounds, and the difference of their number and loudness, which cause variations of *quality*. We know as a fact that the same note played on a flute, a piano, or a trumpet produces very different impressions on the ear. This is because in the *flute* the fundamental sound is heard almost alone, the accessory sounds being few and feeble; in the *piano* the first five or six harmonics are comparatively loud; in the *trumpet* it is the upper harmonics that are relatively powerful.

We may therefore class sounds, not only according to their *loudness* and their *pitch*, but also according to their *quality* of tone. The latter classification is much more important for musical sounds than for noises.

8. On the other hand, noises are clearly divisible into two principal classes, viz. *explosive sounds* which are momentary, and *fricative sounds* which can be prolonged indefinitely. Compare a tap of a hammer and the scraping of a saw.

9. *Mixed sounds*.—When several sounds are produced at the same time, the ear, without special training, does not distinguish them, but only hears the total effect, which seems like a single sound. That, as we have seen, is what happens in the case of a *musical sound*, which is a *harmonic combination of a number of simple sounds*. The same thing also happens when a musical sound and a noise are produced together; in this case we perceive a *mixed sound*, which partakes of the nature of the musical sound and also of that of the noise. We hear mixed sounds when a drum is struck or when the wind whistles in the trees.

THE NATURAL SOUNDS OF BODIES. RESONANCE CHAMBERS

10. Every body capable of producing a sound has a fixed pitch and quality of tone, that is to say, if we cause the body to vibrate freely, it produces a certain compound sound which belongs specially to it. This is the *natural sound* of the body. Thus in the case of musical instruments, in whatever manner we play upon a violin-string we can never make it produce the quality of tone of a flute or of a trumpet.

11. In considering bodies capable of giving rise to a musical sound, we must mention, among others, spaces filled with air ; for the air is an elastic body capable of vibrating regularly and therefore of producing musical sounds. When we blow hard into the hole of a key, for instance, we cause the column of air in it to vibrate ; a musical sound results, namely a whistle. In the same way when we blow into a whistle or an organ-pipe we produce a musical sound. And every key, every whistle, and every organ-pipe gives rise to a special sound, namely the *natural sound* of the column of air contained in it.

12. Experience shows us that sound-waves proceeding from an elastic body can be transmitted to a neighbouring elastic body, and cause it in its turn to vibrate. But the second body does not vibrate strongly unless it has the same natural sound as the first, or at any rate unless the natural sound of the second contains some of the simple sounds which go to make up the first sound. Of course when a body is thus set in vibration by another, the total sound which strikes our ear is more or less strengthened. But it is also considerably modified : on the one hand the simple sounds which are common to the natural sounds of the two bodies are reinforced ; on the other hand those which exist in the first but not in the second are rendered relatively feebler. The quality of tone is therefore altered.

13. The more elastic a body is the more easily is it set in vibration by the sound-waves proceeding from another body, and the stronger is the reinforcement or the modification of the resulting sound. The air enclosed within a limited space is particularly well adapted for modifying sounds in this way. A body enclosing a volume of air is called a *resonance chamber*. When a sound penetrates a resonance chamber, the latter and the air contained in it immediately begin to vibrate. In this way, according to the principles explained above, the sound is modified in various ways according to the shape and size of the resonance chamber through which it passes.

14. An easy experiment enables us to determine the power possessed by resonance chambers in modifying sounds. If we attach to the same organ-reed or reed of a penny trumpet tubes of different shapes and sizes in succession, and blow into the mouthpiece, we find that the resulting sound varies with each tube. The tube of a trumpet, that is to say a tube in the shape of a funnel, gives a shrill sound in which the upper harmonics are chiefly heard; a spherical tube pierced by a small hole opposite the mouthpiece gives a very dull sound. The reed always produces a sound of the same pitch, but the quality of tone is modified by the shape of the resonance chamber.

SOUNDS OF LANGUAGE

15. Speech, the means used by men in an infinite variety of forms for communication with one another, is formed by combinations of a great number of musical sounds and noises, with which we are accustomed to associate particular meanings. The study of these sounds constitutes a science which we call *phonetics*. The sounds of language are all produced by an instrument of incomparable perfection, the *apparatus of speech*, and a knowledge of its

mechanism is necessary for understanding the formation of language.

ORGANS OF SPEECH

16. All speech sounds have their origin in a single physiological act—respiration—modified in different ways. We may therefore consider as being included in the organs of speech, firstly the respiratory system, and secondly the structures which may serve to modify respiration.

Respiratory System

17. The respiratory system includes the lungs, the diaphragm and other muscles, and the windpipe.

18. The *lungs* (fig. 2) are like two elastic bags situated in the chest. They are connected with the outer air by a tube called the *windpipe* (fig. 2). This tube divides into two smaller tubes on entering the chest, and these tubes again divide into an enormous number of lesser tubes called the *bronchial tubes* (fig. 2). These tubes terminate in little air cells, which constitute the lungs themselves. In these cells the air is brought into contact with the blood.

The *diaphragm* (fig. 1) is a dome-shaped sheet of muscle which separates the chest from the abdomen. By contraction of the diaphragm and other muscles the lungs are expanded like bellows. When muscular action ceases the natural elasticity of the chest walls compresses them, expelling the air.

19. *Respiration*.—In their normal position or position of rest, the lungs are half-filled with air. When the blood has circulated through the body it is pumped into the lungs, so as to give off the carbonic acid gas which it contains and receive fresh oxygen. The air in the lungs requires, therefore, to be renewed frequently. This is done by expanding the lungs as explained above. This expansion causes the

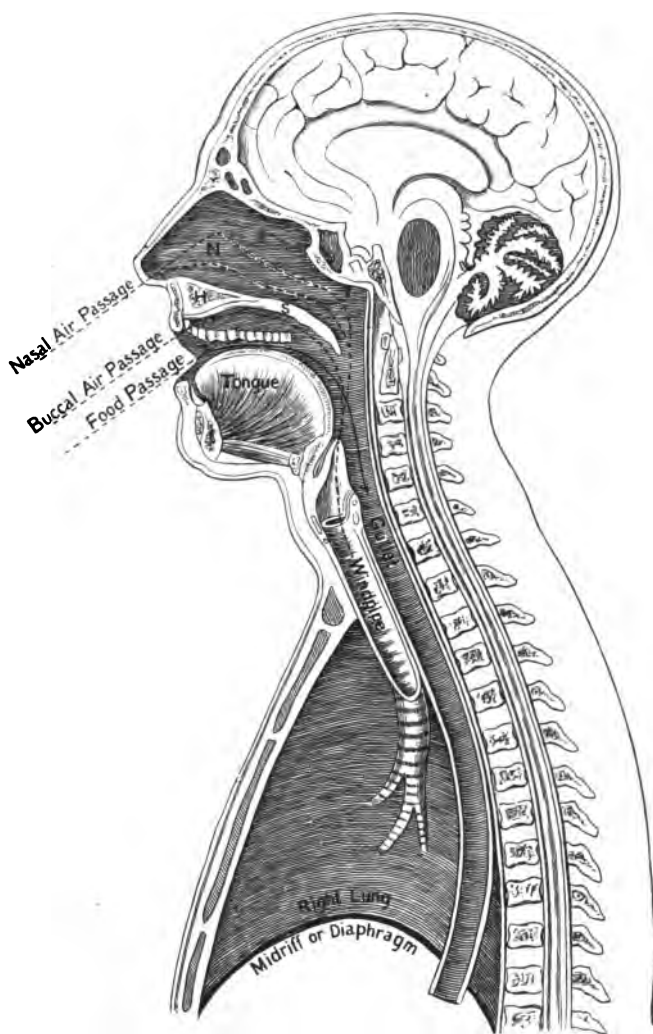


FIG. 1.—Section of the Human Body. (Adapted from Küss and Czermak.)

N. Nasal cavity.

H. Hard palate.

S. Soft palate or velum.

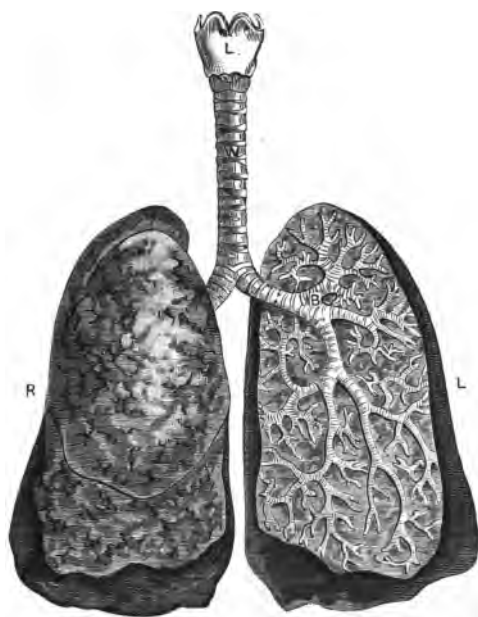


FIG. 2.—The Lungs. (*Adapted from Niemeyer.*)

R. Right lung. **L.** Left lung.

B. Bronchial tubes.

W. Windpipe.

L. Larynx.

§§ 18, 19.



FIG. 3.—The Larynx.

1. Adam's apple
2. Windpipe.
3. Epiglottis.

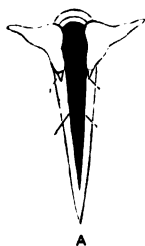
§ 22.



FIG. 4.—The Larynx, with the right shield cartilage removed.

1. Adam's apple.
2. Right vocal chord.
3. Left vocal chord.
4. Windpipe.

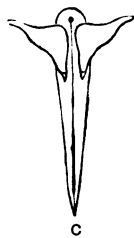
§ 22.



A



B



C

FIG. 5.—The Glottis seen from above.

A. In repose.

B. In deep breathing.

C. In the production of voice.

§§ 22, 36.



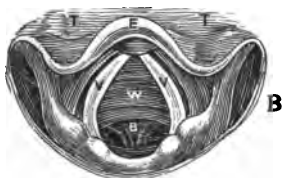
FIG. 6.—The Mouth.

1. Soft palate. 2. Uvula. 3. Pharynx. 4. Tongue.

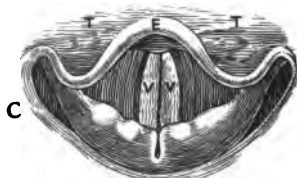
§ 24.



A



B



C

FIG. 7.—The Larynx as seen through the Laryngoscope.

A. Gentle Breathing. B. Deep Breathing. C. Production of voice.

T. Tongue. E. Epiglottis. VV. Vocal chords. W. Windpipe.

B. Bifurcation of windpipe.

§§ 22, 36.

fresh air to rush in as when we open a pair of bellows, and this constitutes the act of *inspiration*. When the lungs are compressed by the elasticity of the chest walls, the vitiated air is expelled, and this constitutes the act of *expiration*. While normal expiration is mainly due to the recoil of the chest walls, the force of expiration may be increased by calling into play the abdominal and other muscles.

Inspiration and expiration together constitute *respiration*.

20. Normal respiration is made through the nose. When we are *out of breath*, that is to say when we feel a need for taking in air in larger quantities than is possible by using the nose only, we breathe through the mouth as well.

Structures which modify Respiration

21. The structures which modify respiration include the larynx, the mouth (including the tongue, lips, &c.), and the nose.

22. The upper part of the windpipe forms the larynx (figs. 2, 3). Its situation in the throat is indicated by the position of the prominence known as the 'Adam's apple' which can be felt and is often visible. Across the larynx, in the direction from back to front, are stretched two membranes called the *vocal chords* (fig. 4). These are continuous along their whole length with the walls of the larynx; in fact they really are folds of the mucous membrane which lines the larynx, modified in structure for their special function. Their interior edges are free, and the space between them is called the *glottis* (fig. 5). During respiration the air passes through the glottis, i. e. between the vocal chords. The chords can be drawn towards one another and may even completely close the glottis. In the latter case the air can be made to pass through by opening them with a series of little puffs, so rapid that

the vibration may give rise to a musical sound (called voice, see § 36).

On the top of the larynx is fixed the *epiglottis* (figs. 3, 7), a kind of lid which remains open during respiration, but is closed in the act of swallowing.

23. It is unnecessary to describe the position of the *mouth*. The back part of it, which is situated immediately above the larynx, is the *pharynx* (fig. 6). The shape of this cavity may be altered in various ways. It communicates below with the larynx and with the gullet, above with the nose, and in front with the mouth proper. In normal breathing it is separated from the latter by the *soft palate* or *velum* (figs. 1, 6), a flexible membrane which can, however, be raised. When raised to its fullest extent it completely shuts off the nasal cavity from the pharynx. From the middle of the free border of the *soft palate* hangs the *uvula* (fig. 6).

24. The palate or roof of the mouth consists of two parts: the back part is the *soft palate*, and the front part is known as the *hard palate*. The hard palate is bounded in front and at the sides by the upper *gums* and *teeth*. The capacity of the mouth may be increased by lowering the lower jaw, which is movable.

25. The sides of the mouth are formed by the *cheeks*, which can be rounded or flattened to a certain extent.

26. In the floor of the mouth is fixed the *tongue*, a flat, elongated, muscular organ, the front part of which is free. The tongue is capable of the most varied movements. Its upper surface is quite free, and it is convenient to imagine it divided into four parts, the *back*, the *front*, the *blade*, and the *tip*. The lower surface is only free towards the tip.

27. Finally, in front of the teeth are the *lips*, which are muscular structures capable of assuming a great variety of shapes.

28. The pharynx communicates above with the cavity of the *nose*. This cavity is divided by a vertical partition into two *nasal passages*, which communicate with the outer air by means of two openings called *nostrils*. The nose, unlike the mouth, can hardly change its shape or position. But the opening which connects it with the pharynx can either be left free by lowering the soft palate or closed by raising it.

FORMATION OF SPEECH

29. The act of respiration is practically a continuous one, but the structures which modify respiration are usually in a state of repose; they are brought into action for the production of speech and for certain other purposes.

30. During normal respiration the glottis is wide open; the velum hangs down towards the tongue; the latter is spread out over the bottom of the mouth so as to touch the lower teeth; the two rows of teeth are just separated, and the lips are quite closed; the air enters and escapes through the nose slowly and regularly, with a fricative noise which is hardly perceptible.

31. It is, however, quite different when we speak. In this case, according to the needs of the moment, we inhale a more or less large quantity of air, which we exhale more or less forcibly through the mouth or through the nose, placing in its way all kinds of stoppages and hindrances. The result of this is the production of sounds—musical sounds or noises—combinations of which constitute language.

We will consider, in what follows, the sounds which go to make up the French language.

PHONETIC TRANSCRIPTION

32. It is essential in studying sounds to be able to represent them by writing, just as it is essential in studying *numbers* to be able to represent them by means of *figures*. The letters are the symbols which ought to represent sounds, just as the figures represent numbers ; but they do so as a rule very imperfectly. Sometimes different letters are used for representing one and the same sound, as in the French word *cog*, where *c* and *q* have the same value ; sometimes one and the same letter is used for two different sounds, as *c* in *car*, *cent* ; sometimes two letters are required for representing one single sound, as *ch* in *champ* ; sometimes one single letter represents two consecutive sounds, as *x* for *gx* in *exemple*, or for *ks* in *boxe* ; finally, a letter is sometimes entirely mute, as *e* in *beau*, *z* in *nez*. It would be very difficult to study scientifically the sounds of a language if we were confined to the use of so defective an instrument. It could doubtless be done ; but it would needlessly complicate the work and constantly give rise to unnecessary difficulties. In fact, writing a treatise on speech sounds with their ordinary representation or spelling as a basis would resemble writing a treatise on arithmetic, using only the Roman numerals.

We will therefore set aside completely the usual spelling, and make use of a *phonetic* alphabet, that is to say an alphabet based on the principle *one symbol for each sound*. At the same time the same symbol may be used for representing several sounds which are very much alike, and the grouping together of which under one symbol cannot give rise to practical inconvenience.

33. The alphabet which we shall use, that of the *International Phonetic Association*, is based on the Roman alphabet ; the shapes of the symbols are quite arbitrary and do not

indicate in themselves their value.¹ This inconvenience is compensated for by the advantage of using a large number of letters familiar to every one. Besides this, this alphabet is now the most widely known of all phonetic alphabets, and the use of it is spreading rapidly. Nearly 1,500 linguists or teachers of all nationalities use it in their books and teaching, and every few months some new work appears in which it is employed.

34. The following is a list of the principal symbols and their values. Each symbol is pronounced like the italic letter (or letters) in the word placed next to it.

a	Fr. <i>part</i>	n	Fr. <i>ni</i>
ɑ	Fr. <i>pas</i>	ɲ	Fr. <i>enseigner</i>
b	Fr. <i>bout</i>	ŋ	Eng. <i>sing</i>
c	Fr. <i>qui</i> (dialectal pron.)	o	Fr. <i>tôt</i>
ç	Germ. <i>ich</i>	ɔ	Fr. <i>tort</i>
d	Fr. <i>dent</i>	œ	Fr. <i>seul</i>
ð	Eng. <i>then</i>	ø	Fr. <i>peu</i>
e	Fr. <i>dé</i>	p	Fr. <i>pas</i>
ɛ	Fr. <i>fait</i>	q	Arabic <i>qaf</i>
ə	Fr. <i>de</i>	r	Fr. <i>rond</i> (lingual <i>r</i>)
f	Fr. <i>faux</i>	ʀ	Fr. <i>rond</i> (uvular <i>r</i>)
g	Fr. <i>gant</i>	ʁ	Fr. <i>rond</i> (Parisian <i>r</i>)
g	Span. <i>luego</i>	ɹ	Southern Eng. <i>red</i>
h	Eng. <i>hit</i>	s	Fr. <i>si</i>
i	Fr. <i>qui</i>	ʃ	Fr. <i>champ</i>
j	Fr. <i>yak</i>	t	Fr. <i>tas</i>
ɟ	Fr. <i>gai</i> (dialectal pron.)	θ	Eng. <i>thin</i>
k	Fr. <i>car</i>	u	Fr. <i>tout</i>
l	Fr. <i>long</i>	v	Span. <i>saber</i>
ʌ	Fr. <i>filles</i> (Southern pron.)	ɥ	Fr. <i>buis</i>
m	Fr. <i>mot</i>	v	Fr. <i>vent</i>

¹ As is the case to a greater or less extent with good shorthand alphabets, and the organic alphabets of Bell and Sweet. See the *Maître Phonétique* for June, 1907.

x	Germ. <i>ach</i>	‡	(inverted sound) (§ 210 note)
y	Fr. <i>tu</i>	—	(weak syllable)
w	Fr. <i>oui</i>	′	(strong syllable)
z	Fr. <i>zèle</i>	ˆ	(half-strong syllable)
ʒ	Fr. <i>joue</i>	:	(length)
h	(breath)	↑	(high pitch)
ɦ	(voice)	↓	(low pitch)
ʔ	(glottal plosive)	/	(rising inflection)
é	(tense vowel)	\	(falling inflection)
è	(lax vowel)	∨	(falling-rising)
ũ	(consonantal vowel)	^	(rising-falling)
ɲ	(syllabic consonant)	†	tongue more advanced
ẽ	(nasalized vowel)	‡	tongue more retracted
ɾ	(devocalized sound)	⋈	mouth more open
ɿ	(vocalized sound)	⋈	mouth more closed
ɰ	(whispered sound))	lips more rounded
*	(inverse sound or click)	(lips more spread

35. Remark. — In naming the symbols it is well to designate them by their *sound*, and not by the usual name of the letter. If we cannot pronounce certain consonants without adding a vowel, we should add simply a voice-murmur *ə*. Call *g* *ger* as in *longer* and not *gee*, *u* *oo* as in *boot* and not *u* as in *stupid*. The beginner will do well to pronounce aloud the sound of each symbol every time it occurs.

To avoid confusion phonetic symbols will be printed in thick type throughout this book.

SECOND PART

THE CONSTITUTION OF LANGUAGE

FUNDAMENTAL DIVISIONS

36. WHEN the throat is in a state of repose, the glottis is open, and the air escaping produces no sound beyond a slight friction ; we can scarcely hear it unless the force of expiration is greater than usual. This is *breath*, which we represent by *h*. But if the vocal chords are brought together so as to close the glottis, the breath can only pass by opening them in a series of little puffs, thus causing them to vibrate (fig. 7). This produces a certain musical sound called *voice*, which we represent when necessary by *n*.

We can exemplify these two actions of the glottis by a very simple experiment. Fix on the end of a tube of glass or wood a short and flexible tube of india-rubber, forming a continuation of it. Then the tube represents the wind-pipe and the india-rubber the lower part of the larynx. In its natural position the india-rubber presents a round opening ; this is the glottis in its state of repose or *breath* ; when we blow down the tube we only hear a slight friction. But if we take hold of the india-rubber at two opposite points with the fingers, and separate these two points in such a way that the two sides of the tube touch one another along a straight line, we have a model of the glottis in the position for *voice*. If now we blow strongly into the tube, the passage of the air causes the india-rubber to vibrate, and we obtain a musical sound which very fairly represents the human voice.

37. The voice escaping from the throat generally passes into the mouth. It is therefore modified by the shape of

this cavity, which acts as a *resonance chamber* (§ 13). And since the shape of the mouth varies as we open it more or less widely, according to the position of the tongue and the lips, &c., we have various modifications of the voice, that is, different kinds of musical sounds. These sounds are called vowels. Such are a, o, e.

On the other hand, the passage of the breath through the mouth or nose may produce explosive sounds or fricative sounds, which are noises. These are the consonants. Such are p, f.

In order that a noise may be produced, the air passage must be intercepted somewhere more or less completely. On the other hand, in order that the sound of the voice may escape without being dominated by a noise, the mouth must be more or less wide open. Speaking roughly, therefore, a vowel is a sound produced with the mouth open, and a consonant is a sound produced with the mouth closed.¹

38. If we pronounce successively a and s while stopping our ears, we perceive during the articulation of a a loud buzzing sound which does not exist in the case of s; this is the effect of the vibration of the vocal chords, which takes place in all sounds in which voice is present. For s, on the other hand, we hear a hissing sound which does not exist in the case of a.

It also happens sometimes that the two things take place at the same time; on the one hand the vocal chords vibrate and voice is produced, and on the other hand a noise is produced in the mouth or nose. But the ear does not distinguish these two sounds from one another, but perceives only the total effect as a mixed sound (§ 9). Such are i, u, y, v, z.

39. We shall not consider mixed sounds as forming a special class; but, according as the musical sound or the noise predominates, we shall class them among the vowels

¹ See, however, §§ 146-8, 170-2.

or among the consonants. We shall consider therefore *i*, *u*, *y* as vowels, and *v*, *z* as consonants. However, *i*, *u*, *y* are *closed vowels*, instead of being *open vowels* like *a*; in pronouncing them, the mouth is relatively closed, and the air escapes with a slight fricative sound¹ which is added to the sound of the voice. And *v*, *z* are *voiced consonants*, instead of being *voiceless consonants* like *f*, *s*; in pronouncing them the vocal chords vibrate, voice is produced, and is added to the fricative noise in the mouth.

40. There is still another state of the glottis, intermediate between breath and voice. When the vocal chords are brought so near to one another that the air cannot pass without a very marked friction, but does not cause vibration, a certain noise is produced called *whisper*. It can hardly be said to form an essential part of language, at any rate in English and French; but when we whisper, this sound regularly replaces the voice. Instead of ordinary vowels and voiced consonants *v*, *z*, &c., we have whispered vowels and whispered consonants. A whispered consonant does not differ greatly from a voiceless consonant, so that we may easily confuse, in whispering, words like *vin* and *fin*.—There are several kinds of whisper.

VARIATIONS IN LANGUAGE AS A WHOLE

DIFFERENT KINDS OF VARIATIONS

41. We have seen that speech is composed of a series of sounds—combined in different ways and succeeding each other with great rapidity—which call up in the mind as the result of long custom certain ideas and certain images.

We will now study groups of sounds and the sounds themselves.

42. The following is our plan. We will consider first as a whole the different manners of speaking of different

¹ See, however, § 162, 1-10.

people or of one person at different times, and we will investigate the causes of these differences.

After this we will discuss the natural divisions of language into groups of sounds both large and small ; and we will study these various kinds of groups and the manner in which consecutive groups of sounds are combined.

Finally, we will examine the sounds individually, isolating them so as to be able to analyse them more accurately, and we shall see in what way they are united to form groups of sounds.

43. In popular language we use, in order to characterize the various manners of speaking of persons with whom we have relations, many expressions not scientifically accurate, but nevertheless roughly so, which may serve as a starting-point for our study.

44. We say, for instance, that a person speaks in a *high* and *loud* voice ; we do not consider these terms as synonymous, but all the same we frequently confuse them and we use *speaking low* as the opposite of each of them. We say also that a person *speaks fast*, and that is not the same thing as speaking in a high or loud voice. There must, however, be some connexion in our minds ; for *speaking gently* may mean *not speaking fast* or *not speaking loud*. And when we say of some one that he *raises his voice* under the influence of anger or other strong emotion, we mean that he speaks *louder*, *higher*, and probably *faster*.

We are justified in saying so because we unite three elements which, though independent, are regularly united, viz. the *loudness*, the *pitch*, and the *rate* of speaking. These elements form together what we may call the *intensity of speech*.

45. On the other hand we say that a person speaks *distinctly* or *indistinctly*, and we recognize that this has nothing to do with loudness, pitch, or rate. In fact *distinctness of articulation* is a quality totally different from any of these.

46. We say also that a person's voice is *clear*, *muffled*, *bright*, *sepulchral*, &c. By *clearness* is generally implied distinctness of articulation. But at the same time we recognize that a clear or muffled voice is not the same thing as a distinct or indistinct manner of speaking.

47. Finally, we say that a person's words are accompanied by an *animated* or *impassive expression of face*, that his *action* is natural, expressive, or forced. This expression of face and these actions do not form an integral part of language properly speaking. They are only *accessories* of speech.

Let us now say a few words about these various phenomena.

Intensity of Speech

48. The intensity of speech depends on three things, the loudness, the pitch, and the rate.

The *loudness* depends on the velocity with which the air is propelled by the lungs ; the *pitch* on the degree of tension of the vocal chords ; the *rate* on the rapidity with which the sounds succeed each other.

49. These three elements are really independent. Every one knows that some people speak fast but softly, others loud but at a low pitch. To be accurate, therefore, we ought to study separately these three phenomena. There is, however, an intimate connexion between them, for they express the same or at any rate analogous feelings. We may then consider them at first as a whole,

50. Intensity of speech is not in general a voluntary act ; it does not result from reflection or even from force of habit. It is a natural, spontaneous, involuntary characteristic of speech, and it follows the laws of all such phenomena.¹

¹ We are not considering here individual differences of force, pitch, and rate, which are the result of habit, or of the constitution of the organs, such as the capacity of the lungs, the length of the vocal

We know that under the influence of certain *strong emotions* many physiological phenomena tend to increase in intensity; the heart beats more quickly, the circulation becomes more active, the breathing stronger, and movements are rendered more marked and more rapid. Joy, gaiety, anger, and fear produce effects of this kind. On the contrary sadness, discouragement, and to a certain extent the tender emotions, produce a relaxation of these functions.

51. Speech, of course, follows these general laws. Under the influence of strong emotions it becomes loud, high, and rapid as a whole. But, owing to the high state of tension of the whole organism, these factors are continually changing, and two words or two syllables of one word may be pronounced with totally different loudness, rate, and pitch.

Under the influence of sadness or discouragement, on the contrary, speech is feeble and low and the inflection monotonous, that is, the musical intervals are small.

Finally, under the influence of the tender emotions, speech becomes feeble, low, and slow as a whole, as under the influence of sadness; but the differences of loudness and rate of speaking, and above all the musical intervals, are very marked, as under the influence of the strong emotions.

It happens too sometimes that cold anger or concentrated hatred is expressed by a low and almost uniform pitch with feeble and slow articulation.

52. These observations suffice to show us how one can guess or recognize from the manner in which a person speaks the feelings by which he is moved. We are guided in this by the recollection, on the one hand, of what we have observed in the case of others—for instance, when

chords, the natural flexibility of the tongue, lips, &c. We know that women's voices are higher in pitch than men's, because the larynx is smaller and the vocal chords shorter, and therefore the latter vibrate more rapidly.

we have heard people speak who are annoyed, frightened, &c. —on the other hand, of our own feelings in similar circumstances. Owing to this sure guide, we are able to attach a meaning to the slightest differences of loudness, pitch, and rate of speaking; and even when a person tries to disguise his feelings, we can frequently recognize them.

53. Besides these involuntary influences, the loudness, rate, and pitch undergo various changes due to the fact that we aim at making ourselves understood by the persons we address. Loudness is especially subject to changes of this kind. When we speak to a person or several persons who are near at hand, a very moderate degree of loudness is required. But if we are addressing a large audience or a person placed at some distance, we are obliged to speak very loudly, especially if we want to be heard above other sounds.

The rate in these cases is often in inverse proportion to the loudness. An orator who is speaking in a very large hall or in the open air speaks more slowly than usual. An analogous phenomenon takes place when a speaker or lecturer wishes to lay stress on some particular point or on a particular part of a sentence. In this case he pronounces slowly and with a loud voice, and frequently in a high pitch. This is often expressed in writing by the use of italics.

54. Intensity of speech may vary progressively. It diminishes gradually as the speaker becomes more and more depressed; it increases as he becomes more and more passionate.

Distinctness

55. Distinctness of articulation depends on the rapidity with which we pass from one position of the organs to another. It may be either an individual quality or a quality

acquired voluntarily for making oneself clearly understood. Of course we pronounce as far as possible very distinctly the most important parts of what we are saying. Distinctness is also connected with certain emotions; decision, authority, and pride are characterized by sounds distinctly articulated ('a peremptory or abrupt tone of voice'): indecision, humility, and shame by sounds more or less obscure and confused.

Quality of Tone

56. The quality of the voice—for we may neglect variations of quality of speech sounds other than the voice—depends to a large extent on the vocal chords, the complicated mechanism of which gives rise to many different kinds of sounds. They may perform their functions more or less well at different times; thus fatigue or inflammation of the throat produces *huskiness*.

57. But the quality of tone may also be affected by various occasional modifications in the throat and mouth. We obtain a clear quality of voice if we stretch the muscles of the cheeks and generally of all the organs, and if we open the mouth well; on relaxing the cheeks and opening the mouth but slightly we obtain a dull quality. Usually too the larynx is raised in the production of a clear, and lowered for the production of a dull quality of voice.

58. The clear quality in general accompanies energetic speaking and appears in the expression of the strong emotions. The dull quality usually expresses sadness, solemnity, discontent. Tenderness has a special quality which partakes of the nature of each of the others, the muscles being relaxed but the mouth well open. If we exaggerate the clear quality by spreading out the corners of the lips we obtain the *bright voice*, the expression of cheerfulness; if we exaggerate the dull voice by drawing together the corners

of the mouth and lowering the larynx as far as possible in the throat, we obtain the *sepulchral voice*.

ACCESSORIES OF LANGUAGE

59. The *expression of the face* which accompanies speaking is usually a spontaneous effect of the feelings which move the speaker. That the play of the features is generally expressive, so as to complete, or in some cases to correct or even contradict, the words spoken, is well known, and it is unnecessary to insist upon it here. We need only say this, that the expression of the face may have an influence on the speech-sounds themselves, and notably on the quality of the voice. If the 'bright voice' expresses cheerfulness, it is because cheerfulness tends to make us laugh, and that when we laugh we spread out the corners of the mouth and stretch the muscles of the cheeks. If a particular variety of dull voice indicates discontent or sullenness, it is because the position of the organs which gives this quality of voice is that which we assume in *pouting*, and so on.

60. *Gesture* is also an essentially spontaneous phenomenon, which serves to complete the spoken language, to replace it in certain circumstances, and in any case to give it force and expression. Every one makes use of gestures, and it happens very frequently that a sentence is begun by words and finished off by an expressive gesture.

'And if you don't do what I tell you . . .' (threatening gesture).

'I say, Jack, . . .' (gesture beckoning to the person addressed to approach).

'And above all . . .' (gesture enjoining silence).

61. Frequently a gesture accompanies an interjection which would have no meaning alone.

'Seeing that no one was watching me, I got up without making any noise, and *ûît* . . .' (gesture indicating that I escaped).

62. Spontaneous gestures are much the same in all countries, but are not always used to the same extent. Thus the French make use of them more than the English. Usually, too, the lower classes employ them more than the upper.

63. But gestures frequently have conventional meanings, which allow us to extend considerably their use. Many savage nations employ them to such an extent that they have some difficulty in understanding each other in the dark or when their backs are turned. Thus the inhabitants of the Lunda district of the Congo, when they wish to express the distance of a place, extend the right hand in the direction of the place, click the fingers of the left hand to express walking, and strike the chest as many times as there are stages required before arriving at the destination. To indicate the weight of a thing, they touch the leg with the right hand, higher or lower, according as the object is heavier or lighter.

64. The *language of signs* used by the Red Indians is a very remarkable development of gestures. By means of this language the tribes of the Mississippi valley and the Rocky Mountains, who speak hundreds of totally different dialects, easily manage to understand one another. It is therefore really an international language, which may be compared to the signals of sailors or to the Chinese writing, which latter is an international written language.

65. Deaf-mutes, too, communicate by means of gestures half spontaneous and half conventional. It appears that they have not much difficulty in communicating with the Red Indians.¹

¹ *Alphabets of gestures* have also been invented for the use of deaf-mutes, which are of course entirely artificial. We are not speaking of these.

DIVISIONS OF LANGUAGE

BREATH-GROUPS

66. We know that we cannot speak for a long time without stopping. We stop for two reasons.

In the first place because it is a *physical impossibility* to speak without stopping. We have seen (§ 31) that speech sounds are formed by propelling air from the lungs. Now the lungs contain only a limited provision of air; when that is exhausted we are obliged to 'take breath', i.e. refill the lungs; and during this process we cannot speak.¹

Secondly, because *we speak to be understood*, and we should not be understood if we did not stop. If a man says, 'It's a fine day,' he expresses a simple idea, which his listeners have no difficulty in understanding immediately. Even if he adds 'to-day', if he says 'It's a fine day to-day', it is not necessary to make a stop anywhere in order to be understood. But if he says, 'It's a fine day to-day; that will please most people,' he has expressed two different ideas, doubtless closely connected, but nevertheless quite distinct. Of course as far as the speaker is concerned he can easily pass from the one to the other without interruption; but for the listeners there are two distinct ideas, and an appreciable time is required for their minds to pass from the one to the other. The speaker would therefore make his meaning clearer if he stopped for an instant after the first clause.

These two reasons together cause language to be divided naturally into groups, which we call breath-groups.

67. If we only stopped for taking breath, the breath-groups would all be of about the same length; and so would be the pauses separating them. But, in order to be understood, we stop every time we are going to make a change of idea; and we stop a longer or shorter time, according as the new idea differs more or less from the preceding.

¹ This is so in general. See, however, §§ 221, 222.

In the sentence, 'It's a fine day to-day ; that will please most people,' the two ideas are very intimately connected, because the second is a natural consequence of the first. It is therefore sufficient if the speaker leaves a very short interval between the two, and if he is speaking to a person who is very familiar with his ways of thinking, he may even make no stop at all. But if he adds, 'It rained yesterday,' we have an entirely independent idea, though there is still a connexion in the mind of the speaker. It is therefore necessary for the speaker to stop after the word 'people,' and if he wishes to make himself quite clear he will do well to make the interval comparatively long.

Breath-groups and the intervals between them are therefore of *variable length*. This does not, however, prevent us from taking breath when we are in need of it. But the shorter the breath-group, the smaller is the quantity of air which escapes from the lungs ; and the shorter the interval, the less are the lungs filled. We arrange, however, the breath-groups and the intervals between them so as never to exhaust the provision of air.

68. From what we have said it follows that a *breath-group corresponds with the expression of a single idea, or, in other words, with a simple sentence*. At the same time it frequently happens that two or three simple sentences are united in a single breath-group without any change, except perhaps a change of pitch or a prolongation of the last sound of the first sentence. This happens especially in familiar conversation, when we address persons who are accustomed to our way of speaking. On the contrary, in formal speech, in teaching, &c., a single elementary sentence may be divided into several groups.

The correspondence between breath-groups and simple sentences is especially marked in what we may call the *careful conversational pronunciation*, which is for various

reasons the type of pronunciation best suited to beginners and for teaching purposes.

69. In the usual spelling *punctuation marks* indicate the limits of simple sentences. They should therefore correspond more or less accurately with the *intervals* which separate the breath-groups. As a matter of fact, a comma (,) generally indicates a very short interval, a semicolon (;) or colon (:) a longer, and a full stop (.) a still longer interval. But this is not by any means an infallible rule; thus the comma frequently indicates a change of pitch without any interval (§ 140).

The rule is not infallible because our system of punctuation is regulated solely by considerations of meaning. These correspond in general with the phonetic requirements, but not always.

70. We may examine here a question which the student might be tempted to ask on reading the preceding paragraphs. Is there then no kind of interval between the words? Or, if there is no interval between the words, what is it that marks their separation?

We are accustomed, in fact, to consider language as composed of words. Usually a word expresses a simple idea, which we can isolate in our minds from the ideas expressed by the other words of the sentence in which it occurs. Besides this, when we read we always see the words separated by blank spaces. It is therefore natural to think that in speaking, or at any rate in *correct* speaking, we similarly separate words by very short intervals, which correspond to the blank spaces.

71. This is not the case however. There are no intervals or other divisions between consecutive words in a group, in fact there is nothing to mark the beginnings and ends of the words. A word is a unit of meaning, but not a phonetic unit. If a man heard some language that he did not understand, he might perfectly well analyse the sounds correctly

and most minutely, but he could never guess where the words began and ended. To do so he would have to know the meaning of the sentences and compare them at length with one another; he might then be able to divide them into words, but even then his division would not be likely to correspond exactly with the true one.

72. The simple statement of this fact, which attentive observation is sufficient to verify, is such a shock to our preconceived ideas that it may be as well to give some proofs in support of it. Let us remark in the first place that the sole object of the phenomena of elision and *liaison*, which are so frequent in French, and so marked that the spelling takes them into account to a certain extent, is to render easier the passage from one word to another without any stop or interruption. Otherwise they are of no use. If there is an interval between words, it would be just as easy to pronounce *nous ouvrons* nu, uvrõ as nuz, uvrõ; and it would be much more difficult to pronounce *l'homme* l, om than læ, om. And, in fact, when there is an interval, *liaison* does not take place. There is nothing more ridiculous than inappropriate liaisons of this kind. *C'est une idée* pronounced set, ynide gives the impression that the speaker has hiccoughs. A well-known professor used to pronounce phrases like *c'est excessivement facile* with an interruption after *est*, thus: s e, "tekse:si:vmã fa'sil. This always caused great amusement to the students.

73. We may also notice that in letters written by illiterate persons and children, that which frequently leaves most to be desired is the division into words. We find examples like the following:

*Je vous senserait reconnaissant.—Giait ben pensé.—Notre père, il marche a sait bien.—Pour voir si cela y rais.—Je suisage avecmane moisel.*¹

¹ 'Ma cuisinière écrira sur son livre de comptes : vin soud pin edlè.' (A. Darmesteter, *Rel. Scient.*, 2 : 322.)

An English child at the sea-side once asked, 'Where are the tinemix?' He had heard the expression *The sea and all that in them* is pronounced by his nurse *tē si: ənd o:l tēt in əm ɪz* and understood *tē si: ənd o:l tē tinemix*.

These faults could not occur if there were a material and tangible separation between the words. But these persons have no guide but the remembrance of their not very extensive reading, and their instinctive efforts to make a logical analysis, which is of course very incomplete.

74. A great many puns would be impossible if there were a phonetic division between words. We say for instance, 'When is it dangerous to go into a field?—When the bulrush is out'; this is because *the bulrush is out* and *the bull rushes out* are pronounced in the same way *tē bŭlɹʌʃɪz aʊt*. Similarly in French *Lapin* 7 and *la pincette lapēset*, *Pourceau* 6 and *pour saucisses pursosis*, *la Thessalie et la Béotie* and *l'athée sali et l'abbé aussi*, &c., are pronounced alike.¹

75. We know too that in the most ancient inscriptions and the oldest manuscripts the words are written one after another without any blank space between them, and that too in all languages. It was only when grammar began to be studied that sentences were broken up into words; further, the principles on which this division is based are not the same in all cases.

Even in the Middle Ages division into words was very irregular. In the manuscripts several words are generally joined together (to economize the parchment), and usually the writers, when passing from one line to the next, did not seem to know or to care whether they had reached the end of a word or not. Numberless details show how little

¹ The following lines of Marc Monnier are well known :

Gal, amant de la Reine, alla, tour magnanime,
Galamment de l'Arène à la Tour Magne, à Nîmes

the copyists realized the value of units of meaning. We find, for instance, the Latin words *de terra* written thus :

. d & er
ra

76. Though the division of sentences into words is not a phonetic division, it must not be concluded that it can never correspond to a phonetic phenomenon. When we stop, for one cause or another, in the middle of a sentence, it is always at the end of a word, unless the interruption is very sudden.

Besides this, certain phenomena of stress, inflection, and length are found regularly at the beginning or end of certain words.¹ This is because there is always an intimate connexion between the meaning and the phonetic phenomena of language. But that does not do away with the fact that *it is impossible to define phonetically the unit of meaning known as a word.*

GROUPS DEPENDING ON INTENSITY

1. STRESS-GROUPS

The Force of the Breath

77. If we take any breath-group in order to analyse its elements, we find that all the parts which compose it do not strike the ear with the same intensity. If we stand at some distance from a person who is speaking, we catch certain sounds, or certain syllables, while others escape us. If we are standing nearer we hear everything, but we feel all the same that every part of what is said is not pronounced with the same loudness.

¹ Especially in certain languages : in German much more than in French, in Finnish more than in German, in the dialect of Yakutsk (a Turkish dialect of Siberia) still more. French is pre-eminently the language of puns.

78. Suppose a person pronounces the phrase: *L'animal qui s'enfuit en courant*.

The syllables¹ *mal*, *fuit*, *rant*, are certainly heard more distinctly than the others. The reason of this is that, in pronouncing them, the air is propelled with more force from the lungs; the vibrations of the vocal chords and the noises in the mouth are therefore more energetic, and the sounds produced are louder.

79. This relative loudness is quite independent of the loudness of the whole, of which we have spoken above (§§ 48-53). The sentence quoted, *l'animal qui s'enfuit en courant*, may be pronounced with very different degrees of loudness as a whole; the speaker may shout it out to a person at a great distance or mutter it to a person at his side. But, unless he wishes to attach some special meaning to it, he always pronounces the syllables *mal*, *fuit*, *rant*, louder than the others. This is the effect of the relative force of the breath. Whatever may be their absolute degree of loudness, the syllables *mal*, *fuit*, *rant*, must be considered as *relatively loud*, and the others *relatively soft* or *intermediate*. The terms usually applied to these degrees of loudness are *strong*, *weak*, and *half-strong* respectively; and *loudness* when applied to syllables is generally known as *stress*. We shall in future employ these terms in this connexion.

80. As a matter of fact there are not merely two degrees of stress to be distinguished, but a very large number. The syllables which we have recognized as loud or strong are not all stressed to the same extent. In the sentence quoted above there are three strong syllables, but the second is perhaps a little stronger than the first; the third is still more so. Indicating by figures the relative stress of each syllable, we might write:

2	1	3	2	1	4	1	2	5
<i>L'animal</i>			<i>qui s'enfuit</i>			<i>en courant.</i>		

¹ We shall see later on (§ 103) precisely what is meant by the term *syllable*.

81. To analyse and represent all these shades of stress would be an endless task. Fortunately, from a practical point of view, it is not necessary. The stress of syllables is largely determined by rhythmical principles. The strong and weak syllables alternate continually and more or less regularly. If in a group of three syllables the third is strong, we may be pretty sure that the first is stronger than the second, unless there is some particular reason for accenting the second. This is the case in the English groups *not at all*, *Aberdeen*, *admiration*, and in the French *animal*, *tu comprends*, *Constantinople*, *Nabucodonosor*. This makes it unnecessary to represent intermediate degrees of stress, the amount of which is usually dependent on the position of the weak syllables with respect to the strong ones.

Sometimes the rhythm may be a little less simple, two short syllables replacing one long one, &c.

82. Again, the ear and the mind have a natural tendency to group the weak parts of a sentence round the strong ones. Although in the sentence, *L'animal qui s'enfuit en courant*, there is no interruption, we nevertheless readily hear it as divided into three parts, viz. :

L'animal qui s'enfuit en courant.

This brings us to a second phonetic division of language: we may divide breath-groups into *stress-groups*. We define a stress-group as the whole of the sounds taken together which are grouped round a relatively strong syllable.

83. Usually a stress-group consists of two or three words intimately connected by their sense. In slow speaking each stress-group may become a breath-group.

The phonetic division into stress-groups corresponds therefore with the grammatical division into words, in this sense, that one word is practically never divided up between two groups, although several words are constantly united in a single group. Besides this, the word of a group which is

the most important from the point of view of the sense almost always contains the strong syllable. When a word is isolated, it forms by itself at once a stress-group and a breath-group.

Stress

84. In considering the relative stress of the different parts of a group, we may distinguish, as in the example given, three degrees: *strong*, *half-strong*, and *weak* syllables. The strong syllable is the most important; it is round it that the half-strong and the weak syllables are grouped, usually according to the rhythmical principle mentioned in § 81.

The strong syllable is often said to be *accented* or *stressed* and the others are said to be *unaccented* or *unstressed*.

85. In writing we may indicate the limits of stress-groups by blank spaces. We mark strong syllables by placing immediately before them the symbol ' ; if required the symbols - and ˆ may be similarly used to mark the weak and half-strong syllables respectively ; but these two symbols can generally be understood. A very strong syllable may be marked by ˆ.

The sentence given above may therefore be written :

ˆla-ni'mal ˆki-sǽ'fqi -ǽ'ku'rǽ

or more simply :

lani'mal kisǽ'fqi ǽku'rǽ.

86. What we have said hitherto applies without much modification to all languages. The differences appear in the interior structure of the groups, notably in the *position* of the strong syllables, and between the degrees of stress of strong and weak syllables.

87. In French, when a sentence is pronounced without any special emphasis, it is the last syllable of each group which is strong, as in the sentence given above. There is an exception, namely that when the vowel in the last

syllable is *e*, it is the penultimate syllable which is strong.

But the difference between strong and weak syllables is not so great as in many other languages. In fact some English and German observers have thought that all French syllables are equally stressed.

When a French word is isolated the last syllable is naturally strong. We may therefore lay it down as a general rule that *French words are always stressed on the last syllable*. French children who are beginning to speak often reduce a word to its last syllable, which they corrupt more or less, thus: *nɔ̃* for *boulon*, *sɔ̃* for *éléphant*, *dɑː* for *regarde*; or this last syllable is redoubled, thus: *didik musique*, *jejet serviette*, *nenen Madeleine* or *Hélène*, *gigit Marguerite*.

88. Those acquainted with Spanish or Italian know that when a French word is also found in these languages, it is an almost invariable rule that the corresponding syllables are stressed; in Spanish and Italian, however, the strong syllable is often followed by other syllables, thus: Fr. *a'mour*, Span. *a'mor*, It. *a'more*; Fr. *pauvre* 'po:vʁ, Span. 'pobre, It. 'povero; Fr. *aimable* e'mabl, Span. *a'mable*, It. *a'mabile*.

In these words, the Latin accent of the words *pauperem*, *amorem*, *amabilem* has remained; in French the syllables which followed the accented syllable have been dropped.

Reinforcement and Shifting of Stress

89. The normal stress is often modified for various reasons, which we may resolve into two fundamental principles: the principle of *emphasis* and the principle of *rhythm*.

90. *Emphasis*. When we wish to call particular attention to an idea, whether as a contrast or for some other reason, we naturally lay stress on the word which expresses this idea. We thus have reinforced stress, e.g.:

That's not "yours, it's "mine.

Ce jeune homme, pour moi, c'est le "frère entre les "frères.

A shifting of stress may sometimes also take place if, in a word of several syllables, one syllable other than the last appears the most important, thus :

"Inspiration and "expiration together constitute "respiration.

Sins of "commission and "omission.

Il faudra se "soumettre ou se "démettre.

Similarly, a word which is normally weak in a stress-group may become strong, for instance :

How "very 'nice !

C'est la "même per'sonne.

Ce n'est "pas 'vrai, ce que tu dis 'là.

91. When the word expressing the main idea has more than one syllable, of which none seem particularly important, it sometimes happens that all the syllables are pronounced equally strongly. Thus M. Gaston Paris, in his lecture on 'Les parlers français', said: 'Parmi les parlers français, . . . il y en a un qu'on appelle par excellence "le "Fran"çais.'

In French, however, the stress is more frequently *shifted* ; the syllable normally strong becomes weak or half-strong, and another syllable becomes strong. Instead of saying *incroyable* ɛ:krwa'jabl, *impossible* ɛ:po'sibl, *miserable* mize-'rabl, these words are pronounced ɛ:'krwajabl, ɛ:'pösibl, "mizerabl.

92. The syllable reinforced is not always the same ; there are all kinds of individual or occasional differences. The rule most usually followed is to reinforce *the first syllable beginning with a consonant*. We say therefore: *le 'miserable, c'est 'parfaitement vrai, quelle 'barbarie* ; but *c'est im'possible, c'est ab'solument faux, quel im'bécile*. The length too affects the reinforcement to a certain extent, a long syllable being more easily reinforced than a short.

If we were to reinforce the first syllable of a word beginning with a vowel, it would be necessary to include in the

reinforcement the final consonant of the preceding word, for instance *se^htoribl*, which would sound absurd.¹ Isolated words may, however, be so pronounced, thus :

'Impossible, mon cher, 'impossible !

'Au fond, il n'a pas tort.²

93. Stress shifting for the sake of emphasis is very frequent in French. There are many words which are much more frequently pronounced with shifted than with the normal stress. As instances we may mention adverbs like *'beaucoup*, *ab'solument*, *ex'trêmement* ; adjectives like *'terrible*, *in'croyable*, *é'pouvantable*, *'ridicule* ; substantives like *'bandit*, *'miserable* ; verbs like *'pleurer*, *'crier*, *'hurler* ; and especially words of abuse, such as *'animal*, *'cochon* ; in short, all words which are usually pronounced with some kind of emotion. At the same time, even in these words, the *normal* accent is on the last syllable ; they are pronounced with the accent on the last syllable when isolated and spoken without emotion.

94. Shifted stress is stronger than normal stress, and is therefore more noticeable. It is thus that many Englishmen, whose linguistic feeling is not sufficiently developed to enable them to correct their observation, have been led to believe that the stress in French is usually on the first syllable.

Facility in the use of shifted stress is essential to a good pronunciation of French. Englishmen are always liable, when they wish to emphasize a word, to reinforce the syllable which is normally strong, as is done in English and in most other languages. The effect from the French

¹ Professor Merlette used to finish off his demonstrations by shouting out *se^htaksivmā fa'sil*, to the great amusement of his pupils. On the other hand, M. de Montaignon, professor at the École des Chartes, used to employ forms such as *se^htapaesolymā vre*.

² These facts show that the tendency in French is to put the reinforced accent on the first syllable ; and this tendency is only partly counteracted by considerations of meaning, when the words begin with a vowel.

point of view is to render the language monotonous and devoid of expression.

95. Shifted stress is especially frequent when a person is speaking under the influence of some strong emotion or when he tries to rouse, persuade, or convince some one else. It is very common in ordinary conversation, and is heard very frequently in an animated address; it is rarer in delivering lectures or in reading aloud.

There are innumerable variations, and the same person may make more use of shifted stress at one time than at another, even if the circumstances be similar. An American professor, Mr. Weeks, who contested the theory that the Latin stress still persisted in French, told the author more than once that in lecturing he rarely put the stress on the last syllable. One day, however, he remarked that the lecturer scarcely shifted the stress of a single word; it turned out that M. Passy was rather tired that particular day and had spoken without animation.

96. *Rhythm*.—The instinctive desire for rhythm, that is, the regular alternation of strong and weak syllables (§ 81), has great influence in French, and may even cause shifting of stress. Compare the two phrases *l'ami de Pierre* and *l'ami d'Alfred*. As sentences they are grammatically identical, and at first sight one would say that in both cases the group *l'ami* ought to be pronounced -la'mi. But in the first phrase *Pierre* is a strong syllable, the principle of rhythm intervenes, and a Frenchman is tempted to pronounce 'la-mid'pje:r like 'a-ni'mal. A middle course is often taken and the two first syllables are pronounced with almost equal stress. On the contrary, the pronunciation of the second phrase is clearly -la'mi-dal'fred. Similar considerations apply to the phrases *le roi Jean* and *le roi Guillaume*.

97. Stress shifting for the sake of rhythm varies according to the style of speaking, but, contrary to the stress

shifting for emphasis, it becomes more frequent in inverse proportion to the importance attached to the meaning of the words and the endeavour to render them expressive. It is very common in reading aloud; and still more so in sentences learnt by heart and repeated mechanically; for instance, in street cries, thus:

'Deux sous 'la vio'lette!

V'là l'fontai'nier! v'là l'rac'mo'deur de 'robi'nets!

Sometimes the successive predominance of the two principles which govern shifting of stress may be observed in the pronunciation of the same person, according to the feelings by which he is influenced. A preacher who always gives out his text with the same introductory words accents these words quite rhythmically, because his only object is that the words should be *heard*, thus:

'Les pa'roles de l'E'criture "sainte que nous 'médite'rons avec 'Taide de "Dieu se 'lisent . . .

Then he reads his text, accenting it according to the sense, because he wishes it to be clearly *understood*. The contrast is very striking.

98. *Rhythm in prose and in verse.*—In order that the rhythm may be well marked it is not necessary to sacrifice the normal or emphatic stress. It is enough to choose and arrange the words in such a way that, by stressing them as naturally as possible, the strong syllables occur at regular intervals. This is done instinctively by Frenchmen, to a certain extent, even in ordinary conversation; it is done still more in lofty style, and more especially in public speaking.

Many public speakers arrange their words so that consecutive stress-groups are about equal in length; it is only in different parts of a speech that they are longer or shorter, and this often happens without any sudden change.

99. In *verse* regularity of stress reaches its maximum. An ordinary verse is composed essentially of a fixed num-

ber of stress-groups, equal or nearly equal in length. In order that a verse may sound correct, it must be possible, while reciting it, to *beat time* in such a way that each beat falls on a strong syllable.¹ For instance:

Le 'jour n'est pas plus 'pur que le 'fond de mon 'cœur.

If this condition is not complied with, the verse sounds incorrect, even if it is constructed in conformity with all the rules of traditional prosody; if it is complied with the verse is correct, even if the number of syllables is not that which is considered necessary.

As a matter of fact, when Frenchmen recite poetry, they seldom pronounce the traditional number of syllables in every line. Although the 'e mutes' are pronounced much more often in verse than in prose, a certain number are nevertheless nearly always suppressed; sometimes several in one line. If the rhythm depended on the number of syllables it would be entirely destroyed. But it is not destroyed because the length of the intervals between the accented syllables depends not only on the number of syllables intervening, but on their *length* and on the length of the pauses which may separate them. We may compare a verse to a musical phrase, which is divided into *bars* of equal length not necessarily containing the same number of notes. Rhyme, of course, is nothing but a poetical ornament, which may very well be dispensed with.

French poets, guided by their ear, follow unconsciously the rule of the regular distribution of accented syllables, at the same time scrupulously observing the traditional and useless rule of the equal number of written syllables. In the opinion of the author the regularity of accented syllables has always been the fundamental principle in French versification, as in that of other modern languages;

¹ Or perhaps on the syllable which would normally be strong in a group.

it was so even when the number of syllables was really fixed, before any 'e mutes' had disappeared from the pronunciation.

See at the end of the book (p. 112) a specimen of poetry, divided into stress-groups of equal length, and in Appendix D some attempts at reconstituting the pronunciation of old French poetry.

2. SYLLABLES

Sonority

100. Sounds pronounced with the same force do not necessarily strike our ear with the same intensity. If we pronounce a word like *passe* pa:s, the vowel *a* is heard much more clearly than the consonants *p* and *s*. This is not due to the force of the breath, for the variation in this case is infinitesimal. But the sound *a*, for which the voice escapes almost without hindrance, is far more *sonorous* than *p* and *s*.

A comparison of the sonority of the different sounds shows that vowels can be heard at a greater distance than consonants, voiced consonants at a greater distance than voiceless consonants, open vowels such as *a*, *ɑ*, *o* at a greater distance than closed vowels such as *i*, *u*, and that *h* is the least sonorous of all speech sounds.

101. Besides this *real sonority* there is an *apparent sonority* produced by the sudden or piercing way in which certain sounds strike the ear, or by special characteristics which distinguish very decidedly certain sounds from all the vague noises about us: thus *i* may often sound more sonorous than *ɑ*. Apparent sonority depends as much upon individual peculiarities and external causes as upon the nature of the sounds themselves; however, it is noticeable that *s* stands out among the consonants on account of its strong apparent sonority.¹

¹ If we go into a church, for instance, during the singing of the

102. The sonority of sounds together with the force of the breath constitute their *intensity*.¹

Syllables

103. Variations in the intensity of sounds give rise to groups of sounds which we call *syllables*. A syllable is simply a group of sounds separated from the others by a perceptible diminution of intensity—whether caused by a diminution of the force of the breath, or by the presence of a less sonorous sound between two more sonorous sounds.

104. Thus, if we prolong an *a*, either without changing the force of the breath or with increasing or with diminishing force, or even with force increasing at first and diminishing afterwards, the impression of unity is not disturbed; there is only one syllable, however long the sound may be continued. But if, after having diminished the force, we increase it, then we have two syllables. In the first case we have a long *a*; in the second we seem to hear two separate *a*'s, although the vowel has been sounding the whole time without interruption. Thus we have a double *e* in the word *créé kree*, and a quadruple *a* in the sentence *Papa a à aller à Paris papa a a ale a pari*.

105. If we combine two or more sounds the same considerations apply, but in this case the intensity is caused not only by the force of the breath, but by the force of the breath and the sonority conjointly, and more especially by the sonority. Thus the group *tap* only forms one syllable, because the sonority increases from *t* to *a* and diminishes again at *p*; but the group *tapi* forms two syllables, because

Psalms, and wish to find the place in the Prayer Book, we can find it most easily by noticing whenever the congregation pronounces an *a*. In Paris the attention of cabdrivers is attracted by the sound *s*;, which is heard in spite of the street noises.

¹ This intensity of separate sounds is to be carefully distinguished from the intensity of speech as a whole described in § 48.

after having diminished suddenly at the beginning of the p the intensity increases again for the i.

106. *Syllabic and consonantal sounds.*—The most intense sound of a syllable, which is almost invariably the most sonorous one, is said to be *syllabic*; the others are called *consonantal* sounds. Syllabic sounds are generally vowels; but nevertheless many languages sometimes treat very sonorous consonants as syllabic. Thus we have in English words like *riddle* ɹɪdl̩, *given* ɡɪv̩, *schism* ʃɪz̩m, which have only one vowel and yet consist of two syllables.¹ In Croatian there are words which have no vowel at all, for instance *brk*, 'moustache,' *smrt*, 'death'; in Czech a whole sentence may occur in which there is no vowel, thus: *strť prst skrz krk*, 'put the finger through the neck.'

In French there are no syllabic consonants except in a few exclamations such as *ps:t*, *ʃ:t chut*, *t**, or in certain familiar contractions like *msa comme ça*, *ʒnsepa je ne sais pas*, *kʁnpip sacré nom d'une pipe*, &c.

With the exception of these rare cases, consonants are not used syllabically in French.

107. We may also have consonantal vowels. If two vowels of unequal sonority are placed next to each other, they may be pronounced as one single syllable, as in the English *mine* main, German *baum* baʊm 'tree', Italian *voi voi* 'you', where *i*, *u*, and *i* do not form separate syllables. Combinations of two vowels forming one syllable are called *diphthongs*. If three vowels are thus combined they are said to form a *triphthong*.

In French diphthongs are only found in quite exceptional cases and in rapid pronunciation. This happens in certain combinations of words such as *à outrance* aʊtrɑ̃s, *il a oublié* ilaʊbli, *il n'est pas ici* inepɑ̃si, *où ira-t-il* uʁati(l), *il est si*

¹ Words like *given*, *schism* are sometimes treated as monosyllabic, especially in music. This does not apply to words containing a syllabic *l̩*.

oublieux ilesiübliø, and sometimes in words like *paysan* peĩsǎ, *chaotique* kaõtik, *caoutchouc* kaũtfu. With these exceptions there are no diphthongs in French; if two vowels are placed next to each other, either they form two syllables as in *pays* pei, *chaos* kao, or else one of them becomes a consonant as in *où est-il* weti(l), *ça y est* saje.

108. Hence, generally speaking, and neglecting a few unimportant exceptions, we may lay down the simple rule that in French there are as many syllables as there are vowels.¹

109. *Division into syllables.*—The separation of syllables is marked by the point of least intensity. In French this point usually comes immediately after the syllabic sound (the vowel). When a consonant comes between two vowels, it belongs to the second syllable, thus: *tapis* ta'pi, *cadeau* ka'do; frequently two and sometimes three consonants may be taken thus with the following vowel, for instance: *tableau* ta'blo, *instruit* ẽs'trui. In the case of two consecutive words the division into syllables is the same, thus: *les hommes* le'zom, *une arme* y'narm. There is no difference in pronunciation between *les aunes* and *les zones* le'zo:n, *celui qui l'a vu* and *celui qu'il a vu* sɛ'lui kila'vy (except in the case of those people who pronounce the former sɛ'lui killa'vy).²

The opposite is generally the case in the Germanic lan-

¹ We are referring to French as usually spoken by educated Parisians and northern Frenchmen. Some people pronounce *moi*, *nuage*, *mien*, *paille*, as mĩa, nĩa:ɣ, mĩẽ, paĩ, rather than mwa, nũa:ɣ, mjẽ, pa:j. This pronunciation is regular in the South of France.

² For this reason children constantly confuse the limits of words. The author as a child used to understand *la remise* larmi:z as *l'armise*, and therefore used to say *une armise*. M. V. Henry used to tell a story that once as a child his attention was called to *l'École normale primaire* lekolnormal, that is, the students of the training college taking a walk; he understood *les colnormals*, so that one day on meeting one of the students he said: 'Tiens, voilà un colnormal.' These blunders have sometimes become part of the language: thus *l'aboutique*, *m'amie* have become *la boutique*, *ma mie*.

guages, where the consonant is often attached to the preceding vowel.¹ In English we distinguish *an aim* ən'elm from a *name* ə'neim.²

110. A syllable ending with a vowel is called an *open syllable*, a syllable ending with a consonant is called a *closed syllable*. It follows from what we have said that in French open syllables are the more usual. The sound *e* is almost unknown in closed syllables in French: thus in *été* e'te both syllables are open; *j'ai* is pronounced ʒe but *ai-je* is pronounced e:ʒ.³

QUANTITY

111. All sounds may be continued for a longer or shorter time, and their length, as compared with that of the surrounding sounds, is an essential element of speech, distinct from the rate of speaking as a whole (§ 44).

We distinguish in general three degrees of quantity, *short*, *half-long*, and *long*. The vowel *a* is short in *patte*, half-long in *Paris*, long in *part*.

In the transcription used in this book short quantity is not marked; a half-long sound is marked where necessary by · and a long sound by : placed immediately after the sound.

112. *Vowels*.—Differences in quantity of the French vowels are clearly distinguishable in strong syllables. Compare *renne* ren, *reine* re:n; *mettre* metr, *maître* me:tr; *lime* lim, *abîme* abi:m; *je tousse* ʒetus, *nous tous* nutu:s; *tu boîtes* tybwat, *la boîte* labwa:t; *droite* drwat, *pâte* pa:t; *rosse* ros, *Minos* mino:s; *Russe* rys, *Bacchus* bakky:s.

In weak syllables the differences are not so marked.

¹ This is by no means always the case. The rules for division of syllables in English are very complicated (they are given in Ellis's *Speech in Song*, pp. 96, 97).

² Nevertheless a *nadder* has become an *adder* and an *ewt* a *newt*.

³ In many of the dialects and local pronunciations, however, we find regularly sje:ʒ, pe:r, &c.

There are practically only short and half-long vowels in these positions. This difference may, however, serve to distinguish words, for example *tyran* tɪrɔ̃, *tirant* ti-rɔ̃; *couvent* kuvɔ̃, *couvant* ku-vɔ̃.

In future we shall mark the half-long vowels by the same symbol as the long vowels, it being understood that this symbol only indicates half-length in weak syllables.

113. The quantity of the French vowels is partly determined by general rules, and partly by the sense of the words. In order to study it we must distinguish the *final syllables of stress-groups* (syllables normally strong) from the *non-final syllables* (syllables normally weak).

114. *Final syllables.*—In final open syllables the vowel is always short, whatever the ordinary spelling may be, thus: *pas* pɑ, *tôt* to, *boue* bu, *ami* or *amie* ami, *lycée* lise.

This is the natural pronunciation of educated Parisians, and that of the whole of the North of France excluding local dialects. In other districts, and notably in the French-speaking parts of Switzerland and in Belgium, the vowels which were formerly followed by an *ə* have remained long, thus: *venue*, *amie*, *boue*, *fermée* are pronounced vɛny:, ami:, bu:, ferme:, or even vɛnyɥ, amij, buw, fermei, and are quite distinct from *venu*, *ami*, *bout*, *fermé*. In declamation the same distinction is often made even in Paris.

English students must be careful not to lengthen or diphthongize final open syllables; thus *tôt* is to not tɔ̃, *bout* is bu not bu: or buw.

115. In final closed syllables, on the contrary, the vowel is always long if the syllable is closed by one of the consonants *v*, *z*, *g*, *j*, *r* (that is the voiced fricatives (§ 202) and *r*), which we may therefore call *lengthening consonants*. Thus we have *cave* ka:v, *ruse* ry:z, *rouge* ru:g, *œil* œ:j, *rire* ri:r, *livre* li:vr. However a *r* which does not terminate a syllable does not lengthen the preceding vowel, thus: *porte* port, *lourde* lurd, *terne* tern, *parle* parl.

Here too there are local variations. In districts where *ɛ* is pronounced instead of final *j* the vowel is not lengthened; thus in Switzerland *file* and *œil* are pronounced *fiɛ* and *œɛ*. At Lyons these words are often pronounced with a *j* but without lengthening the vowel, thus: *fij*, *œj*. This pronunciation seems to be spreading also among the younger generation of Parisians.

On the other hand the younger Parisians usually lengthen the vowels which precede the voiced plosives *b d g* (§ 182), thus: *robe* *ro:b*, *fade* *fa:d*, *dogue* *do:g*.

116. The vowel in a closed syllable is also long whatever consonant follows, if it is one of the following: *o*, *ø*, *ɔ*, *ɑ*, *ē*, *œ*. We may call these vowels *naturally long* in French. Hence *côte* is pronounced *ko:t*, *meute* *mø:t*, *conte* *kɔ:t*, *rampe* *rɑ:p*, *mince* *mɛ:s*, *humble* *œ:bl*.¹

117. In final syllables other than those just mentioned—that is, when a vowel other than *o*, *ø*, *ɔ*, *ɑ*, *ē*, or *œ* is followed by a consonant other than *v*, *z*, *ʒ*, *j*, or *r*—the vowel may be either short or long. Compare the examples given in § 112.

The vowel *a* in this position is nearly always long; *e* is often long and often short; *u*, *o*, *a*, *i*, *œ*, *y* are nearly always short. As pronounced by the younger generation the vowels which are not long ‘by position’ are usually short. Moreover the differences of quantity are less marked than in the pronunciation of older people.

118. When the final syllable of a stress-group becomes half-strong or weak, as the result of a shifting of stress, the quantity of the vowel may be slightly shortened, but a long vowel never becomes really short.

119. *Non-final syllables*.—One rule in this case is the exact opposite of the corresponding rule in the case of final

¹ *e* is not found in closed syllables in the pronunciation of Paris and is therefore never long. In the very numerous dialects, both educated and popular, in which *e* is pronounced in words like *mère*, *faire*, *piège*, *bête*, *bêche*, &c., this sound is long.

syllables. The vowels of closed syllables are usually short, and the vowels of open syllables may be half-long (or even fully long when pronounced with shifted stress).

Compare :

	fœ:j	fœjtɔ̃
	ty t le:v	lev twa
and		
	gro	gro:si:r
	ba	ba:te
	nu dø	dø: fwa

120. Otherwise, the rules in the case of non-final syllables are analogous to those given for final syllables. The consonants *v*, *z*, *g* and *r* often render the preceding vowel half-long, thus: *raison* re:zɔ̃, *léger* le:ʒe, *pourrir* pu:ri:r, *curé* ky:re.

The vowels *o*, *ø*, *ɔ̃*, *ɑ̃*, *ɛ̃*, *œ̃* are always half-long in non-final open syllables, thus: *hauteur* ho:tœ:r, *queuter* kœ:te. *ɑ* is nearly always half-long in this position, and *e* very often, thus: *bâton* ba:tɔ̃, *château* ʃɑ:to, *gémir* ʒe:mi:r.

121. A vowel which is long when the syllable is final usually becomes half-long when the same syllable is non-final; thus we say *je aime* and *je aime*, *je coule* and *je coule*, *je baisse* and *je baisse*, &c. But it sometimes happens that the vowel becomes short as in *courir* ku:ri:r although *je cours* is pronounced *je kur*. This often happens when the vowel of the final syllable is rendered long by a *g* and still more often by a *j*, thus: *courage* ku:ra:ʒ but *courageux* ku:raʒø; *soleil* so:le:j, but *enseigner* ɑ̃:so:leʒe, *feuille* fœ:j but *feuille* fœ:ʒe.

122. In a few cases a vowel which is long in a closed final syllable may remain half-long in a closed non-final syllable, when the latter is followed by some suffix the meaning of

which is still clearly felt, thus: *dur* dy:r gives *durété* dy:rte, *vive* vi:v gives *vivement* vi:vmð.

123. When a non-final syllable becomes strong, as the result of a shifting of stress, the vowel if short is *not* lengthened. *La même personne* lamempe'r'son becomes with shifted stress la'memperson. If the vowel is half-long it may become long or even over-long, thus: *il y en a beaucoup* ijðna'bo:ku, *il pleurait* i(l)'plœ:re.

124. *Consonants*.—Consonants too may be more or less long. In French, however, the differences are not so marked as in English. In the latter language the *l* in *build* bil:d, and the *n* in *sin* sin:, for instance, are long, while in *built* bilt, *seen* sij̃n, they are short. However, the following cases, which are the same in English and French, should be noted.

1. A final consonant is longer when following a short vowel than when following a long vowel. Compare *renne* ren: and *reine* re:n, *balle* bal:, and *Bâle* ba:l. This lengthening is perceptible enough to make the German pronunciation of short final consonants after short vowels—as in the German words *denn* dèn, *ball* bal—sound disagreeable and abrupt to French ears. The lengthening is especially marked at the end of a phrase the last word of which is emphatic, for instance: *je reste seul* ʒə restə soəl:, *c'est raide* sɛ red:.

2. A consonant which precedes another final consonant is longer when the latter is voiced than when it is voiceless, thus: *talç* talk, *algue* al:g, *arc* ark, *lague* lar:g, *perche* pɛrʃ, *berge* ber:g, *Alpe* alp, *Elbe* ɛl:b.

We do not mark these lengths of consonants in the transcription. They depend entirely on their positions, and may therefore be understood.

125. Long and reinforced consonants are also found initially, sometimes in familiar conversation as the result of contraction, as in *de temps en temps* t:ð:zð:tð, *tout à l'heure*

t:alœ:r, *je ne sais pas* s:epa, sometimes in familiar conversation and in declamation under the influence of a very strong accent, as *jamaïs je ne ferai cela* "g:ame genfre'sa. These forms are found most frequently at the beginning of breath-groups. After a vowel a long consonant is usually replaced by a double consonant (§ 126). But long consonants are sometimes found in the middle of groups, especially in declamation, thus: *vous êtes le sel de la terre* vu'zet læ"s:el də la'te:r, *il faut faire juste* i(l)fo'fœ:r "g:yæt.

Double Sounds

126. We have already noticed (§ 104) that a sound may be divided between two syllables, and that this gives the effect of repetition of the sound, for instance when we say aa.

Consonants may also be divided in this way. In a word like *Allah* alla, there are not really two l's, but one l prolonged and divided into two parts by a diminution of intensity. This is called a *double consonant*. In phonetic transcription we mark a double consonant by writing the symbol of the simple consonant twice, thus distinguishing it from a long consonant. It must, however, be remembered that there are not really two consonants. We might consider the first symbol as marking the on-glide and the second the off-glide (§ 228).

127. Double consonants are not rare in French. We find them in learned words such as *illégal* illegal, *Abba abba*,¹ in grammatical forms such as *je mourrai* gemurre, *nous croyions* nukrwajjō, or again in certain contractions, as in *netteté* nette, *là-dedans* laddā, and above all in combina-

¹ Under the influence of the ordinary spelling forms of this kind tend to multiply. We hear frequently *grammar*, illyxjō, *litteratur*, and even *adderō* 'in order to sound the h!' These forms are especially common in the pronunciation of persons of small education who try to 'speak correctly'.

tions of words such as *elle lit elli, ça ne coupe pas sankuppo, ils montent tous i(l)mōttu:s*.

Double consonants are even found between other consonants, as in *une porte très solide yn port tre solid* (oftener *yn porte tre solid*).

A double consonant may begin voiceless and end voiced, and vice versa, thus: *dites donc ditdž, ne tombe pas ne tž:bpə*. But in this case assimilation (§ 234) generally takes place.

In the not very frequent cases in which doubling of consonants occurs in French it is very marked, much more so than in other languages such as Italian or Swedish, where the phenomenon is much commoner.

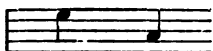
128. When a French person speaks under the influence of some strong emotion, consonants which are ordinarily simple are frequently doubled or lengthened. Thus *allons bon!* may be pronounced *alžb'bz* and *c'est désolant* *sed'dezoldž*. The pronoun *le* between two vowels is very often pronounced *li*, thus: *je l'ai vu gällevy, nous l'avons dit nullavždi*.

INFLECTION

129. We have already seen that speech contains a musical element, namely the voice, the pitch of which varies according to circumstances. When we *sing* the voice passes from one note to another, the notes being chosen so as to form a melody.

The same kind of thing happens in ordinary speech. There is, however, a fundamental difference. In singing, each syllable is sung on a given note, or if we pass from one note to another we generally do so by a leap without letting notes of intermediate pitch be heard. In speaking, on the contrary, the voice hardly ever remains on one note; it does not pass by leaps from one note to another, but it glides through the intervening notes, and it can traverse the

whole length of the musical scale within the limits of the voice. In music we may write, for instance,



Voi - là !
(vwa - la)

but for representing speech the notation



Voi là !
(vwa la)

would only be a very rough approximation to the sound of *voilà* pronounced with a falling intonation. It may be noted in this connexion that French pronunciation is nearer to singing than English or German.¹

130. Another difference is that in singing we give prominence to the musical element of speech, by opening the mouth widely and by other means, even at the risk of articulating certain sounds badly and being understood with difficulty. In speaking, on the other hand, the main object is to make the meaning clear, and we therefore articulate distinctly, sacrificing if necessary the musical element.²

131. In French, as in most other European languages, variations of pitch are only used for modifying the general sense of sentences. Being closely allied with the emotions and with the meaning of the words used, they are very marked

¹ The musical intervals in speaking are much greater than is generally supposed. The voice reaches notes much higher than the upper limit of the singing voice and descends so low that it degenerates into a sort of growl resembling the Arabic 'ain. One of the translators has frequently heard M. Passy in the course of his lectures make intervals of two octaves or even more in single stress-groups.

² O. Jespersen has advanced a theory, which has much to be said for it, that speaking and singing were originally one and the same thing. According to this theory the separation between the two was of gradual growth, as was the case later between song and poetry.

in French on account of the emotional character of the French nation.

Variations of pitch sometimes affect whole sentences, sometimes only one part or another.

132. Generally speaking, astonishment, like the other strong emotions, renders the speech intense (see § 48); hence exclamations are usually in a high pitch. But it is otherwise if incredulity, disdain, or discontent is felt. We can easily recognize the kind of emotion implied in the following examples, in which the sign ' indicates high pitch and ˘ low pitch¹:—

' *What a beautiful day!* — ˘ *What a beautiful day!*

' *Really!* — ˘ *Really!*

and in French:

' *Tiens! te voilà!* — ˘ *Tiens! te voilà déjà!*

' *Allons donc!* — ˘ *Allons donc!*

' *Ah bah!* — ˘ *Bah!*

' *Quelle idée!* — ˘ *Quelle idée!*

133. Interrogation is closely allied to exclamation. Like exclamation it is usually expressed in a high pitch. Compare:

˘ *We are going.* ' *Are you coming?*

˘ *We were all there.* ' *What were you doing there?*

and in French:

˘ *Vous venez.* — ' *Venez-vous?*

˘ *Tu es fatigué.* — ' *Es-tu fatigué?*

˘ *Il est arrivé.* — ' *Est-ce qu'il est arrivé?*

If, however, there is a touch of discontent, the pitch is low.

˘ *What are you doing here?*

˘ *Now are you satisfied?*

and in French:

˘ *Tu n'as pas oublié ma commission, j'espère?*

˘ *Eh bien, est-ce clair maintenant?*

Similarly a request which implies humility or supplica-

¹ See note to § 141.

tion is expressed in a low pitch ; and by way of contrast a summary refusal is expressed in a high pitch, thus :

└ *Do you think you could do this for me?* — *« Certainly not.*
and in French :

└ *Voulez-vous bien me rendre ce service?* — *« Certainement non.*

134. Change of pitch may be sudden or gradual. When we pass from one subject to another the pitch changes suddenly ; a new subject is usually begun in a higher pitch, which gradually becomes lower.¹

135. Exclamations and questions not only require a high pitch, but also a *rising inflection*, which we express by / placed immediately after the syllable where the pitch attains its maximum height.² This rising inflection is often more sudden in exclamations than in questions ; it is frequently preceded by a falling inflection \ which renders it more marked, thus :—

└ *Are you going* \ *out* / ?

└ *Pour qui me prenez* \ *vous donc* / ?

This rising inflection takes place even in ironical or scornful expressions, such as those in §§ 132, 133.

136. The rising inflection is not always introduced at the end of the sentence. If there is a specifically interrogative word, it is usual to put the rising inflection on that word only, while the rest is spoken at a lower pitch, either level or falling. Similarly when the interrogation is contained in one part of the sentence only. Examples :

Whatever / └ *made him do that* ?

Pourquoi donc / └ *est-ce qu'il a dit ça* ?

M'as-tu entendu / └ *quand je t'ai appelé* ?

¹ In reading many people are in the habit of beginning each paragraph in a very high pitch, which is gradually lowered until they reach the end of the paragraph. This repetition of the same manner of changing the pitch is sometimes intolerably monotonous.

² See note to § 141.

We may, however, in sentences of this kind put the rising inflection at the end, but the meaning is changed, thus :

Pourquoi donc/est-ce qu'il a dit ça ? (Why did he say so ?)

Pourquoi donc/est-ce qu'il a dit ça/? (Why did he say that, and not something else ?)

137. In French the pitch rises, but in a less degree, in unfinished statements, for instance: *Et alors vous comprenez/ . . .* The same thing happens at the end of each word or phrase of an enumeration or sequence of any kind, thus: *Il est venu avec sa femme/, ses enfants/, ses amis/ ; Il y avait des fleurs/, des fruits/, des gâteaux/ . . .*

In sentences of this kind another mode of inflection is sometimes used in French as in the following example :

Des fleurs/, fruits/, gâteaux . . .

The pitch often remains approximately level in doubtful statements.

138. On the contrary, in affirmations or commands the pitch falls to a greater or less extent according as the sentence is more or less decided. The fall is frequently preceded by a rise which renders it more marked. Examples :

It is/impossible\.

C'est pour ça/qu'il est parti/d'ici\.

C'est trop fort\.

In French the fall at the end of a sentence often goes so far that the voice is altogether lost and is replaced by breath or weak whisper. Final syllables may be thus breathed or whispered in sentences like :

Il est par ti.

Il y en a beau coup.

Ce n'est pas beau.

Mon sieur !

139. There is also a tendency in French, and to a less extent in other languages, to mark by a higher pitch that which is most important in a sentence. Words pronounced

with shifted stress (§ 98) generally take a high pitch on the strong syllable. Example :

Il est parti en 'pleu₁rant et en 'cri₁ant.¹

Following the same principle, incidental, subordinate, or parenthetical sentences are expressed in a low pitch.

140. It is easily seen that our punctuation-marks correspond to a certain extent to changes of pitch. Generally speaking, in French, a comma or semicolon indicates a rise, a note of interrogation or exclamation indicates a more marked rise. A full stop indicates a fall, the end of a paragraph a more marked fall. A clause between two commas is generally pronounced with a low pitch, a parenthesis indicates a still lower pitch. This rule, however, like that of the pauses represented by punctuation-marks, is by no means absolute. Our punctuation-marks are distributed according to the sense of the words and are not phonetic symbols.

140 a. These inflections, combined with the pitch of the words as a whole, are sufficient to express the most varied ideas, although the sounds themselves do not change. Thus the word *yes*, pronounced with different inflections, may have the following meanings :—

<i>Yes</i> \	That is my opinion.
₁ <i>Yes</i> \	I am sure of it.
<i>Yes</i> /	Is that so ?
¹ <i>Yes</i> /	You don't mean it !
<i>Yes</i> ∨	That is possible, but I doubt it !
<i>Yes</i> Λ	Of course.
<i>Yes</i> ∨	Certainly, at first sight, but . . .

The French word *Oui* pronounced with corresponding inflections has the same meanings.

Even though we have very simple methods for expressing

¹ Raising of pitch possibly existed before shifted stress and was perhaps the cause of the latter. This would be parallel to the change of the Latin musical accent into the ordinary stress-accent in the Romance languages.

interrogation by means of the words themselves, we often do not use them but content ourselves with the interrogative inflection: instead of saying *Do you think so?*, *Venez-vous?* or *Est-ce que vous venez?*, we say simply *You think so* /, *Vous venez* /.

141. The importance of pitch is greater in French than in English, and still greater in some other languages than it is in English or French. In Italian and Spanish there is no other means of distinguishing interrogation from affirmation.

In Swedish, Norwegian, and Croatian certain inflections are an integral part of certain words. It is only by the inflection that we can tell whether the Norwegian word 'bœnnær means *peasants* or *beans*, or whether the Swedish word 'anden means *the spirit* or *the duck*. The languages of the Far East go still further. In Chinese the syllable *fu* sung on different notes may mean *father*, *man*, *woman* or *riches*. In Siamese *ko:* pronounced with level inflection is the name of the letter *k*, *ko:/* is an interjection, *ko: * means *to build*, *ko: ^* means *then*, *ko: v* means *lively*. This sometimes leads to curious mistakes. Thus an Englishman meets a mandarin and means to address him by the title *tſu my lord*; he mistakes the pitch and finds out too late that he has called him a *pig*.¹

STUDY OF THE SOUNDS

GENERAL CLASSIFICATION

142. We will now pass to the study of the separate sounds, combinations of which form syllables, stress-groups, and breath-groups.

143. Sounds differ, not like syllables by the nature and

¹ All the symbols used in the preceding paragraphs to represent the general pitch of a sentence and the rising and falling inflections only give the roughest approximations. The pitch is continually changing and can therefore only be satisfactorily represented by a curved line, as has been attempted in Appendix A.

order of their elements, but in their entirety. We must therefore study them one by one. Of course we cannot exhaust the list; there are as many sounds as there are different positions of the organs of speech, that is, an infinite number. But we can fix a limited number of sounds of distinct types. We will study the formations of these standard sounds, and group round them the less marked varieties which we shall have occasion to notice.

144. We have said already that speech sounds are naturally divided into musical sounds or vowels and noises or consonants. We will begin by studying the vowels.

VOWELS

Classification of Vowels

145. If we pronounce different vowels before a looking-glass, we see that the mouth is put into a particular shape for each vowel. When we pronounce *a* we open the mouth wide; when we pronounce *i* we half close it and spread the corners of the lips as if we were going to laugh; in the case of *u* we draw the corners of the lips towards each other and push them forward a little, as in pouting.

146. There is, however, something common to all vowels. If we prolong a vowel and at the same time stop our ears with our hands, we hear a kind of strong buzzing sound which is absent when we pronounce *s* or *f*. And if while pronouncing a vowel we place the fingers on the 'Adam's apple', we feel a vibration which is not felt in the case of *s* or *f*. This vibration may be felt in other places, for instance in the chest for *a*, in the head for *i*, &c.

The reason of this is that the foundation of all vowels is the *voice*, which is produced by the vibration of the vocal chords (§ 36). It is thus that every vowel can be *sung*; that is, it can be pronounced on various notes while the quality of tone remains unchanged.¹

¹ Or approximately so. As a matter of fact the quality of tone of

147. Voice is the musical sound essential to the production of a vowel. This sound is modified by the shape of the mouth, which acts as a resonance chamber (§ 13). It is for this reason that each position of the mouth gives rise to a particular vowel, even if the voice produces the same note.

At the same time in pronouncing a vowel the mouth can never be completely closed as for *p*, or almost completely as for *f*. If this were so a noise would be produced which would predominate over the sound of the voice, and the result would no longer be a vowel but a consonant (§ 39).

148. We may therefore define a vowel as *a modification of the sound of the voice by the resonance of the mouth (or mouth and nose) unaccompanied by any predominating noise.*

149. What we have just said applies to vowels pronounced aloud. When we whisper, the voice is replaced by whisper (§ 40), and ordinary vowels by *whispered vowels*.

150. Since every vowel is produced by a definite position of the organs of speech, we may class the vowels according to these positions. The following are the chief modifications.

151. Firstly, we may open or close more or less the passage for the air in the mouth by moving the tongue nearer to or further from the palate. From this point of view we distinguish four classes of vowels, viz. *closed*, *half-closed*, *half-open*, and *open vowels*.

152. Secondly, we may draw the tongue back in the mouth and raise the back of the tongue towards the soft palate, or we may advance it and raise the front of the a vowel pronounced on a high note is not quite the same as that of the same vowel pronounced on a low note, but the difference is not sufficient to alter perceptibly the characteristic resonance of the vowel. This difference is probably due to the fact that the back part of the tongue cannot be kept in *exactly* the same position in the production of high and low notes, and therefore the shape of the resonance chamber is slightly altered.

tongue towards the hard palate. This gives us two classes of vowels which we call *back* or *velar* and *front* or *palatal vowels*. Vowels formed in intermediate positions are called *mixed vowels*.

153. Thirdly, we have to consider the position of the lips, which may be *neutral*, *rounded* and pushed forward, or *spread*.

Generally the lip-position corresponds to the tongue-position. The lips are *rounded* for the *closed back vowels*, they are practically *neutral* for the *open vowels*, and they are *spread* for the *closed front vowels*. Vowels formed in this way are by far the most numerous, and may be called *normal vowels*. Those formed otherwise are called *abnormal vowels*.

Normal Vowels

154. The following table gives the normal vowels used in French, arranged according to the position of the highest part of the tongue. The position of *u* indicates that the back of the tongue is raised into the closed position when we pronounce *u*, &c.

	Back	Front
Closed	u	i
Half-closed	o	e
Half-open	ɔ	ɛ
Open	a	a

155. The difference in the quality of tone of the vowels is due to the different shapes of the resonance chamber formed by the mouth and other organs (see § 14).

The *absolute pitches* corresponding to each position of the organs may best be compared by whispering the vowels. In this way we get an idea of the pitches of the resonance

chambers themselves apart from the pitch of the voice. Thus if we whisper the series of vowels

u-o-ɔ-a-a-e-i,

we have no difficulty in hearing that the pitch gradually rises.

The reason of this is that when we pronounce u, the mouth forms a large resonance chamber elongated by the protrusion of the lips and having only a small round opening. A resonance chamber of this shape gives a low pitch, according to the laws of acoustics. In the case of i the tongue is pushed forward, the resonance chamber is small, and the opening is in the shape of a long slit. This gives a high pitch. The other positions give intermediate pitches.

156. Besides these fundamental pitches the vowels reinforce certain harmonics. It is the number and relative loudness of these harmonics that determine, perhaps even more completely than the fundamental pitches themselves, the characteristic qualities of tone of the vowels.

157. Many scientists have attempted to ascertain the absolute pitches of vowels. The results obtained by Helmholtz seem to be the most satisfactory.¹

Abnormal Vowels

158. In passing from one normal vowel to another the respective positions of the tongue and the lips are adjusted so that they both raise or both lower the pitch. In the case of the abnormal vowels, on the other hand, these two actions tend to counteract one another. Thus in pronouncing the vowel y, as in the French word *tu ty*, the front of the tongue is raised as for i, which raises the pitch, but the lips are rounded as for u, which lowers it.

¹ See Helmholtz's *Sensations of Tone*, translated by A. J. Ellis, 3rd ed., pp. 103-118.

The vowels formed in this way have therefore intermediate pitches. It appears, however, that the tongue exercises a greater influence on the pitch than the lips.¹

159. In French there are three abnormal vowels, *œ*, *ø*, *y*. All three are front rounded vowels, that is, vowels formed by raising the front of the tongue and rounding the lips. The degree of rounding for each vowel is approximately the same as for the back vowels of the same height.

English students have usually some difficulty in pronouncing correctly the French abnormal vowels. They are most easily acquired by rounding the lips as for *u*, *o*, and *ɔ*, and trying to pronounce *i*, *e*, and *ɛ* respectively. The following exercises should be practised, *iyiy . . .*, *üyuy . . .*, *eøeø . . .*, *oøoø . . .*, *œœœœ . . .*, *œœœœ . . .*.

We must complete the vowel-table by adding these front rounded vowels. We place them before the corresponding normal vowels.

	Back	Front	
		abnormal	normal
Closed	u	y	i
Half-closed	o	ø	e
Half-open	ɔ	œ	ɛ
Open	a	a	

160. The absolute pitch of the abnormal vowels

œ, *ø*, *y*

appears to be nearly that of the three normal vowels

a, *ɛ*, *e*.

But the harmonics reinforced by them are different, and it is mainly this which distinguishes the quality of tone of *y* from that of *e*, &c.

¹ See Helmholtz, loc. cit.

161. Before going on to the details of the French vowels it may be as well to note one point in regard to them which distinguishes them from many of the English vowels. They are nearly all¹ *tense*. By this we mean that tension of the tongue is essential to their correct pronunciation. If the tongue is lax the quality of the vowel is considerably modified. Examples of *lax* vowels are those in the English *sit*, *soot*; these are the lax vowels corresponding to the tense *i* and *u*. Tense and lax vowels may be marked in the phonetic script when necessary by ' and ` placed over the vowel. Thus the French *sité* may be written *sít* and the English *sít* *sít*.

The difference of quality between tense and lax vowels is especially marked in the case of the high vowels. In the following description the vowels are all to be taken as tense, in the absence of any statement to the contrary.

Detailed Description of the Oral Vowels

162. We can now consider in order the various French vowels, beginning with the back vowels.

1. *u*. This vowel is formed by raising the back of the tongue towards the soft palate as high as possible without producing audible friction, and by protruding the lips so as to leave only a small round opening. This sound may be long as in *jour* *gu:r*, *tous* *tu:s*, or short as in *loup* *lu*, *tousse* *tus*.

2. *o*. If we lower slightly the back of the tongue and make the lip-opening a little larger we obtain *o*. This sound may be long as in *chose* *ʃo:z*, *côte* *ko:t*, and all other strong closed syllables (§ 116), or short as in *pot* *po*, *saut* *so*, *trot* *tro*.

3. *ɔ*. By lowering the back of the tongue and enlarging the lip-opening still further we obtain *ɔ*. This sound may

¹ The exceptions are noted in § 167.

be long as in *cor* kɔ:r, *loge* lɔ:g, or short as in *trop* trɔ,¹ *cotte* kɔt.

4. *ɑ*. By still further lowering the tongue and by opening the lips so that they take up the neutral position we obtain *ɑ*. This sound may be long as in *tasse* tɑ:s, *paille* pɑ:j, and nearly all strong closed syllables, or short as in *pas* pɑ, *cas* kɑ.

The English *ɑ*-sound as in *father*, *part* is *ɑ**, that is, a sound intermediate between the French *ɑ* and *a* (see below), but rather nearer to *ɑ*.

It is hardly possible to lower the tongue beyond the *ɑ* position; we may therefore say that *ɑ* is the back vowel formed with the mouth as wide open as possible.

If we keep the tongue-position of *ɑ* and round the lips slightly as for *ɔ*, we obtain a vowel which may be represented by *ɔ*- or *ɑ*), and which is approximately that in the English *all*, *horn*. This vowel does not exist as a regular sound in French. *ɑ*): is, however, sometimes used as an exclamation of astonishment or discontent. In fact the sound is simply *ɑ*: pronounced while pouting. The French *ɑ* may be acquired by unrounding the vowel in the English word *all*.

5. *a*. By advancing the tongue from the *ɑ* position and slightly spreading the corners of the lips we obtain *a*. This sound may be long as in *part* pɑ:r, *page* pɑ:g, *boite* bwɑ:t, or short as in *rat* rɑ, *patte* pat.

This sound must be carefully distinguished from the vowel *æ* in the English *pat*, *man*. *æ* is more or less intermediate between *a* and *ɛ* (see below) and has a very distinctive sound. *a* is intermediate between *ɑ* and *æ*. It is heard in the Scotch pronunciation of English.

6. *ɛ*. By raising the tongue slightly towards the hard palate and spreading a little more the corners of the lips we obtain *ɛ*. This sound may be long as in *tête* tɛ:t or short

¹ This word is also frequently pronounced *tro*.

as in *net* *net*. In contrast with most of the other vowels, *ɛ* is frequently long or short before the same consonant; in fact its length is very often used to distinguish words, thus: *reine* *re:n*, *renne* *ren*, *tête* *tɛ:t*, *tette* *tɛt*, *seine* *sɛ:n*, *saine* *sɛn*.

This sound resembles the English vowel in *net*, *men*. The two are, however, distinct. The English sound is *è*, a relaxed *e*. *ɛ-* is the first element of the diphthong in the English words *there*, *fair*, &c., *Œ-e*, *fe-e*, &c.

7. *œ*. By pronouncing *ɛ* with the degree of lip-rounding of *o* we obtain *œ*. This sound may be long as in *veuve* *vœ:v*, or short as in *jeune* *gœn*.

8. *e*. By raising the front of the tongue still further towards the hard palate and spreading the lips a little more than for *ɛ* we obtain *e*. This sound is only found fully long in exceptional cases.¹ It is fairly frequent half-long as in *gémir* *ge:mi:r*, but it is usually short as in *été* *ete*.

9. *ø*. By pronouncing *e* with the degree of lip-rounding of *o* we obtain *ø*. The sound may be long as in *neutre* *nø:tr*, *jeune* *gø:n*, and all other strong closed syllables (§ 116), or short as in *peu* *pø*, *queue* *kø*.

10. *i*. This vowel is formed by raising the front of the tongue towards the hard palate as high as possible without producing audible friction, and by spreading the lips so as to leave a long narrow opening. This sound may be long as in *abime* *abi:m*, *pire* *pi:r*, or short as in *lime* *lim*, *gite* *git*.

11. *y*. By pronouncing *i* with the degree of lip-rounding of *u* we obtain *y*. This sound may be long as in *pur* *py:r*, *ruse* *ry:z*, or short as in *vue* *vy*, *lune* *lyn*.

Nasalized Vowels

163. The vowels which we have been studying hitherto are formed by the mouth only; they are called *oral vowels*.

¹ Viz. when a syllable in which it is half-long is pronounced with shifted stress.

Any vowel may, however, be *nasalized* by lowering the soft palate so that part of the voiced breath escapes through the nose. The resonance of the nose is thus added to that of the mouth and gives a peculiar quality of tone to the vowels. There are four such vowels in French.

English students are apt to think that the French nasalized vowels consist of two consecutive sounds, viz. an oral vowel followed by a nasal consonant (§ 187). Various simple experiments can be made to show that the nasality is produced throughout the whole duration of the vowel and is not added at the end. If we hold two small well-polished mirrors, one in front of the nose and the other in front of the mouth, and pronounce a nasalized vowel, e.g. *ɑ̃*, we see that they both become moistened together, because the air is escaping by the mouth and nose at the same time; if, however, we pronounce an oral vowel followed by a nasal consonant, e.g. *ɑ:n*, they are dimmed one after the other.—Again, if we pinch the nose, the nasalized vowel is modified but not interrupted, whereas a combination such as *ɑn* could not be continued.—Again, by placing the fingers against the sides of the nostrils, we can distinctly feel the vibrations of a nasalized vowel from the beginning.¹

164. The four vowels which are nasalized in French are *o*, *ɑ*, *ɛ*, and *œ*, or more accurately *o-*, *ɑ*, *ɛ*, and *œ-*. These nasalized vowels are represented in the phonetic script by *õ*, *ã*, *ẽ*, and *œ̃*; they are the vowels in *bon*, *banc*, *bain*, *un*. The usual spelling may easily lead us to think that the vowels in the words *pin*, *un* are *i* and *y* nasalized. But if we practice pronouncing *ɑ-ã*, *ɛ-ẽ*, *œ-œ̃*, *o-õ*, we learn to feel the mechanism of nasalization; we can then form quite easily any other nasalized vowels, and we shall recognize that neither *ĩ* nor *ỹ* exist in the ordinary pronunciation of

¹ We are of course referring to the Northern French pronunciation. In the South these vowels are often pronounced only slightly nasalized, and followed by a nasal consonant, e. g. *lɑmpɛ lɑ̃mpɛ*, &c.

French. They are found in other languages, and in certain dialects in the East of France.¹

English students usually have some difficulty in keeping ð and ʒ separate, they replace the two by ʒ-, that is the sound of the English word *or* nasalized. The two sounds must be carefully distinguished.

165. Like the pure vowels, o and ø, the nasalized vowels are always long in strong closed syllables.

Weak Vowels

166. All the vowels we have hitherto studied are found in French both in strong and in weak syllables (§§ 77 ff.). There are four others which only occur in weak syllables. They are all in intermediate positions and are pronounced with the tongue less tense than in the case of the strong vowels, but not so lax as in the English weak vowels. Their quality of tone is therefore rather duller than that of the strong vowels. These vowels are represented by ò, â, è, ø.

167. 12. ò. This vowel is pronounced with the back of the tongue a little higher than for o, but not so high as for o, and slightly advanced and relaxed; it may be represented more accurately by ò+. It frequently replaces o in weak syllables, thus: *comment* is pronounced kòmă, *poteau* pòto, *prononcer* prònõ:se. It is difficult to distinguish it from o. Many speakers replace it by a kind of œ.

13. â. For this sound the tongue is in a position intermediate between a and a, and is slightly relaxed; the sound may be represented more accurately by â+. This vowel frequently replaces a and a in weak syllables and varies between these two sounds. In *carreau* kâ:ro it is nearer to a and in *mardi* mârdi it is nearer to a.

¹ For instance in the neighbourhood of Plombières (Lorraine), where *un lapin* is pronounced îlepî, *un sapin* îsepî, *tundi* lÿ:di; and at Bournais (Franche-Comté) where *un chien* is pronounced îtʃi.

14. è. This vowel is pronounced with the front of the tongue a little lower than for e but not so low as for ε, and slightly retracted and relaxed; it may be represented more accurately by è-ι. It is a sound which frequently replaces e or ε in weak syllables, thus: *méchant* mɛʃɑ̃, *régner* rène, *esprit* èspri. In some cases the sound approaches nearer to e and in others to ε.

15. œ. This is the preceding sound with slight lip-rounding (about that for œ); it might be written œ-ι. It is the vowel in *je* ʒə, *me* mə. If a Frenchman tries to emphasize or prolong an œ, he has some difficulty in not pronouncing œ or ø: thus phrases like *prends-le* are pronounced prɑ̃'lə or prɑ̃'lø, &c. The difference may, however, be heard in comparing the two phrases *je leur dis* ʒlərdi and *je le redis* ʒlərdi; besides this œ may always be elided, whereas œ and ø may not.

168. ɐ is the vowel which appears to be the easiest and most natural to Frenchmen. When a Frenchman opens his mouth to produce a vague sound (as for instance when he does not know how to answer a question), he generally pronounces ɐ. The ɐ in this case is usually slightly nasalized, the velum not being raised to its fullest extent.

ɐ is thus the *neutral vowel* in French. The other weak vowels have a tendency to change into ɐ: thus *monsieur* is pronounced mɑ̃'sjø or mɑ̃'sjɐ, *prononcer* prɑ̃ɔ̃'se or prɑ̃ɔ̃'sɐ, *peut-être* pø'tɛ:tr or pɐ'tɛ:tr, *faisan* fɛ'zɑ̃ or fɛ'zɐ, *déjeuner* deʒœ'ne or deʒɐ'ne, *soucoupe* su'kup or sɛ'kup.¹

ɐ is often introduced at the end of a group or in order to separate several consonants so as to render them more distinct, for instance: *Ouest-Ceinture* is frequently pronounced

¹ Similarly ɐ has replaced various Latin vowels, e.g. *cheval* from *caballum*, *premier* from *primarium*, *semier* from *seminare*, *peuple* from *populum*.

westasē: 'ty:r, un ours blanc œnursə 'blō, lorsque 'lɔrsəkə,
c'est Max sɛ'maksə, un arc œ'narkə.

General Characteristics of the French Vowels

169. Considering the system of French vowels as a whole we notice :

(1) that it is intermediate between the very simple systems of Spanish and Italian¹ and the more complicated systems of the Germanic languages ;

(2) that the positions of all the French vowels, with the exception of the weak ones just described, are well defined and remote from intermediate positions ;

(3) that, with the same exception, the French vowels are all formed with tension of the muscles, and not with relaxation as in the case of the short English and German vowels ;

(4) that long vowels are not diphthongized as in English ;

(5) that there are more front vowels than back vowels, so that the tongue is, more often than not, forward in the mouth and convex ;

(6) that the action of the lips is very vigorous, seeing that a series of three front vowels is completely transformed by a change in the position of the lips ;

(7) and lastly, that nasalization is a frequent and important feature.

These characteristics tend to render the French language very distinct, though they diminish to a certain extent its flexibility. French is the exact opposite of English in this respect. In the latter language the vowels are mostly lax,

¹ Italian only possesses one *a*-sound, intermediate between *a* and *ā*, and no abnormal vowels. In Spanish there are only five clearly distinct vowels. Nasalization does not occur normally in either of these languages. On the other hand they contain diphthongs. The pronunciation of the South of France resembles that of these two languages.

the long vowels tend to become diphthongs, the tongue is generally back in the mouth and concave, the lip-action is weak, and nasalization hardly exists, and where it does it has no influence on the meaning of words.

CONSONANTS

Classification of Consonants

170. We have seen (§ 148) that a vowel is a modification of the sound of the voice by the resonance of the mouth, to which resonance may be added that of the nose (§ 163).

The sound of the voice may also be an essential factor in the pronunciation of a consonant. We may repeat the experiments indicated in § 146, replacing the vowels by consonants such as *v*, *z*, or *m*. We shall find that, by stopping the ears while pronouncing these consonants, we hear the same buzzing sound as in the case of the vowels. We can also feel the same vibration when we place the finger on the 'Adam's apple'. Lastly, we can sing a tune on each of these consonants; in fact, we frequently sing on the consonant *m* when humming.

171. However, in the case of these consonants the voice is not the primary element. When we pass from *v* to *f*, in pronouncing *v:f:v:f*, the vocal chords suddenly cease to vibrate, as we may hear by stopping the ears. The character of the consonant is changed, but at the same time it is evident that *f* is a sound which is closely connected with *v* (compare Fr. *neuf*, *nouveau*; *bœuf*, *bouvier*; Eng. *grief*, *grieve*). Similarly *s* is closely connected with *z*.

It is evident that the essential element in both *v* and *f* is the fricative noise produced by the air as it passes between the upper teeth and the lower lip. In the case of *v* there is, in addition, a voice-murmur¹ in the larynx.

¹ This is the term usually employed when we wish to express the

172. A consonant may therefore be defined as a *noise produced in the mouth, nose, or throat, with or without the addition of the sound of the voice.*

173. From this definition follows the first classification of consonants. Consonants in which the noise is accompanied by the sound of the voice are called *voiced consonants*, and those in which it is not, are called *voiceless* or *breathed consonants*. We can easily distinguish them if we pronounce a series of consonants while stopping the ears, or by trying to sing them. The student should practise until he recognizes them when he hears them. In this way we shall find for instance that *f, s, p, t, k* are voiceless consonants and that *v, z, b, d, g* are voiced.

We see thus that the consonants go in pairs, each voiceless consonant corresponding to a voiced. As a matter of fact several of the voiceless consonants corresponding to the English and French voiced consonants do not occur at all in either language, or only occur in exceptional cases, e.g. *m, l, q (= j)*; but these consonants are found in other languages, and it is not difficult to produce them when once the fundamental difference between *x* and *s, v* and *f, &c.*, has been mastered.

174. Voiceless consonants are sometimes called *hard* consonants, and voiced consonants *soft* consonants. This is because the former are pronounced with the whole force of the breath, and, being simply noises, strike the ear forcibly. In the case of the latter, part of the force is used up in setting the vocal chords in vibration; and the noise, which is consequently weakened, and combined with the sound of the voice, has a softer quality.

175. The classification into voiced and voiceless consonants is, however, not sufficient. If we pronounce a number of voiceless consonants before a looking-glass, we see the sound of the voice without specifying any particular vowel-modification. The phonetic symbol for this is *a* (§ 86).

see or feel that the position of the organs changes as in the case of vowels. But in the case of consonants, the air-passage must be obstructed or considerably narrowed in some place, otherwise no perceptible noise would result. In the case of *p*, for instance, the air-passage is completely closed for an instant by the lips; in *f*, the passage is narrowed so that the air passing between the upper teeth and lower lip produces a fricative noise.

176. From these examples it follows that consonants may be classed in two ways: (i) according to the way in which they are formed, e. g. complete closure for *p*, narrowing for *f*; (ii) according to the place where they are articulated, e. g. between the two lips for *p*, between the upper teeth and lower lip for *f*.

177. According to the way in which they are formed we distinguish five classes of consonants:

(1) when the air-passage is completely closed and then suddenly opened, so that a kind of explosion is produced, e. g. *p*, *b*, *t*, *k*; a consonant of this kind is said to be *plosive*;

(2) when the air-passage is closed and opened in the same way in the mouth, but at the same time the velum remains lowered, so that the air escapes through the nose, e. g. *m*, *n*; a consonant of this kind is said to be *nasal*;

(3) when the air-passage is closed in the middle and open at the sides, e. g. *l*; a consonant of this kind is said to be *lateral*¹;

(4) when an obstruction is placed in the air-passage and then removed from it a number of times in very rapid succession, e. g. *r*; a consonant of this kind is said to be *rolled* or *trilled*;

(5) when the air-passage is simply narrowed at a given point, so that the air passes through with continuous

¹ Lateral consonants are frequently pronounced *unilaterally* (see § 193).

friction, e. g. *f*, *v*, *s*; a consonant of this kind is said to be *fricative*.

178. We notice at once that the plosives are *instantaneous* noises, whereas the fricatives are *continuous*. The nasal, lateral, and rolled consonants are also continuous. The latter are sometimes grouped together under the name of *liquids*. The nasals and laterals consist of a weak fricative noise usually followed by a weak explosion; when the sounds are voiced, the voice-murmur renders the fricative noise almost imperceptible. These consonants therefore partake of the nature of plosives, fricatives, and vowels.

179. According to their place of articulation we distinguish six main classes of consonants:

- (1) *labial consonants*, formed by the lips or lips and teeth, e. g. *p*, *f*;
- (2) *dental consonants*, formed by the tip or the blade of the tongue and the upper teeth or gums, e. g. *t*, *s*¹;
- (3) *front or palatal consonants*, formed between the front of the tongue and the hard palate, e. g. *j*²;
- (4) *back or velar consonants*, formed between the back of the tongue and the beginning of the soft palate, e. g. *k*²;
- (5) *uvular consonants*, formed between the furthest part of the back of the tongue and the extremity of the soft palate, e. g. *R*.
- (6) *glottal consonants*, formed between the vocal chords, e. g. *h*.

¹ *Dental* is the term usually applied. It is, however, not quite accurate, as consonants formed against the upper gums are also included.

² *Front* and *back* are the terms usually employed with reference to vowels. It is, however, more convenient to use *palatal* and *velar* in the case of consonants, these terms being more in accordance with the terms *labial*, *dental*, &c.

and is in fact approximately the uvular *q* in the Arabic *qahoua* 'coffee': thus *croûte* *krut* is pronounced in Paris *qrut* or *qaut*.

186. The *glottal plosive* *p* is heard most frequently when a person coughs; in this case it is followed by a strong escape of air, thus: *p*h or *p*nh. As a speech sound it does not occur regularly in French, but it is sometimes heard before an initial vowel or after a final vowel, especially in certain interjections, thus: *po*, *op*, *poʔ*, *həʔ*, *djaʔ*; also when a phrase terminates abruptly, e. g. *oui* *wip*, &c.

In some other languages *p* occurs regularly. In North German it precedes all initial strong vowels, e. g. *über* *py:ber*, *Verein* *fər:pain*,¹ *Theater*. It is used constantly in Danish and Arabic and serves to distinguish words otherwise identical.

187. *Nasals*.—The nasals are consonants formed by completely closing the air-passage in the mouth and at the same time lowering the velum so that the air escapes through the nose. Both the fricative noise and the explosion are very weak. For the friction of the air in the nostrils is hardly heard unless the force of the breath is very great, and the air is not compressed as in the case of the plosives, so that there is no forcible escape of air when the closure in the mouth is opened.²

For this reason most languages only contain voiced nasals. When these are pronounced, all that we hear is the sound of the voice modified by the resonance of the nose, accompanied by slight friction and followed by a slight explosion. Thus in French the nasals are only found voiceless in exceptional cases (§§ 189–91). The same remark applies for similar reasons to the other liquids.³

¹ Compare *hersin* *herain*.

² The explosion is, however, very distinct. This is due rather to the sudden increase in the resonance of the voice than to the force of the explosion itself.

³ Among the languages in which voiceless liquids are regularly used

188. Although the sound of the nasals is quite different from that of the plosives, we see that their formation is very similar, the only difference being in the opening of the nose-passage. Thus if we try to pronounce a nasal consonant while pinching the nose, we produce a sound which is almost the corresponding plosive (not quite, for the resonance of the greater part of the nasal cavity is added): *a strong man* *æstrɔŋmæn* thus pronounced sounds very like *æstrɔgbæd*, *mon ami mōnami* like *bodabi*, *un homme cənɔm* like *œdob*: a Frenchman who has a cold says almost *ʃsqiarybe*.

189. For the bilabial nasal *m* the closure is formed exactly as for *p*, *b*: example, *même me:m*. It is the easiest and most natural of all sounds, for, in breathing strongly, we produce a voiceless *m̥*, and if we add the sound of the voice we produce the voiced *m*.¹ In English and French *m̥* is sometimes found in interjections such as *hem m̥m*, *ahem, ehem m̥m̥m*; and in French at the end of words when the preceding sound is a voiceless consonant, as in *prisme prism̥*, *rhumatisme rymatism̥*. In words of this kind the *m̥* is often scarcely heard and is in fact entirely suppressed by some, who say *pris*, *rymatia*.² Sometimes under the influence of a voiceless consonant *m* becomes *m̥* at the beginning of a group in rapid speech: for instance *monsieur mæsɶ* may become *m̥æsɶ*, *il me semble que oui i(l)mæsð:blə kəwi* may become *m̥sðp kəwi*. In these two cases the *m̥* often loses its nasality and becomes therefore a weak *p*, thus: *pæsɶ*, *psðp kəwi*. Some people pronounce *m̥* in the middle of words such as *hameçon amsð*.

190. For the dental nasal *n* the closure is formed exactly

we may mention Icelandic, e.g. in the words *hnakkur* 'saddle', *hlaða* 'to load', *hringur* 'ring', and Welsh, e.g. in *fy* [mhen] *mhen* 'my head', *fy* [nhad] *nhad* 'my father', *Llangollen*, *Rhys*.

¹ But of course for a complete *m* the mouth must be closed at the beginning and opened at the end.

² The pronunciation *prism*, *rymatism* is also heard.

as for *t*, *d*: examples, *nord* nɔ:r, *aune* o:n. The voiceless form *ɲ* is pronounced by some before or after other voiceless consonants, as in *des tenailles* detɲɑ:j, *hameton* hɑɲtɔ, but *n* is more usual in these cases. *ɲ* is more frequent at the beginning of words, but in this case it occurs only in rapid speech, thus: *je ne sais pas* ɟensepa may become *ɲsepa*, or even *tsepa* with a weak *t*.

191. For the palatal nasal *ɲ* the closure is formed in the same way as for *ɔ*, *ɟ*. It is the sound of *gn* as in *vigne* viɲ, *agneau* ɑɲo, and is commonly known as 'n mouillé'. The place of articulation varies somewhat; some speakers advance the tongue slightly and others retract it slightly from the standard position. The sound never occurs initially.¹ Before a voiceless consonant *ɲ* may become more or less voiceless, as in *enseignes-tu* ɛ:sɛfity.

Some persons do not completely close the air-passage in the mouth, although opening the nose-passage. The result is that instead of *ɲ* they pronounce a nasalized *j*, which may be represented by *ĵ*; thus *régner* rɛɲe, *signer* siɲe become *rɛĵe*, *siĵe*. At Batignolles station (Paris) the porters are often heard calling out *batijol*! Other speakers replace *ɲ* by the group *nj* with a dental *n* more or less palatalized, and make no difference between the second syllables of *régner* and *panier*, *rɛɲje*, *panje*. Conversely the pronunciation *ɲ* for *nj* is frequently heard thus: *panier* pɛɲe, *meunier* mœ:ɲe. Others again pronounce a proper palatal *ɲ* but introduce a *j* before or after it, so that *régner* becomes *rɛɲje* or *rɛjɲe*.

The sound *ɲ* is a source of great difficulty to Englishmen. The correct pronunciation of it may be reached in various ways:

- (1) Keep the blade of the tongue from touching the upper

¹ Except in certain dialects, including vulgar Parisian, which contains words like *naf*, *nonot*, *nol*. Similarly at Ézy-sur-Eure we find *ne:f nêfe*, *medlar*, *ɲɔf*, fool; and in the Val d'Ajol *nœ nouveau*, &c.

gums by inserting the end of a pencil (or the finger) into the mouth to a depth of about three-quarters of an inch ; then try to pronounce *n* ; the closure cannot be formed against the gums on account of the obstacle and must therefore necessarily be made against the hard palate.

(2) Pronounce *ŋ*, the sound of *ng* in *thing*, and gradually move the tongue further forward, until the palatal position is reached.

(3) Pronounce *j*, the sound of *y* in *yes*, and gradually make a complete closure at the point where the front of the tongue is nearest to the hard palate ; this gives the position of the tongue for the sound *ɲ*.

192. For the velar nasal *ŋ* the closure is formed as for *k*, *g*. In French the sound only occurs accidentally in certain assimilations, thus: *une longue main* *ynlʒ:gmẽ* is often pronounced *ynlʒɲmẽ* (§ 238). It is the sound of *ng* in the English *thing* and German *Ding*, and is one of the most difficult sounds for Frenchmen.

193. *Laterals*.—The lateral consonants are normally formed by closing the air-passage in the middle of the mouth, while allowing the air to escape at the sides. It frequently happens, however, that the air-passage is closed in the middle and on one side and is open on the other side ; this does not appreciably affect the sound of the consonant. As in the case of the nasals these consonants are usually voiced, and only occur voiceless in certain special positions.

194. The only lateral consonant occurring in French, as pronounced in the North, is *l*: examples, *la la*, *nul nul*. This is the dental lateral formed with the tongue in the same position as for *t*, *d*, and *n*, except that a passage is left for the air on each side (or at any rate on one side). It must be carefully distinguished from the English *l* as in *eel* *ijl*, *table* *tɛibl*. This English *l* is formed by placing the tip of the tongue against the upper gums and raising the back of the tongue towards the soft palate (towards the

u position); in French it is formed by placing the blade of the tongue against the upper gums, as for t, d, n, and raising the front of the tongue towards the hard palate (towards the i position). This gives a marked difference in quality.

In French the consonant is usually voiced. But at the end of a group, if preceded by a consonant, l is devocalized, completely if the consonant is voiceless, partially if it is voiced, thus: *peuple* pœp_l, *table* tab_l. The l in these cases is weak and sometimes even disappears altogether in familiar speech. It does not form a separate syllable, and thus shows a marked contrast to the English l in *people* pijp_l, *table* tɛlb_l, which is voiced and forms a separate syllable, besides being different in quality as explained above. Partial devocalization is found not infrequently in the middle of groups, before or after a voiceless consonant, as for instance in *Alpes* alp, *plus* plɥs; and especially in familiar speech at the beginning of groups, for instance: *le père et la mère* lper:ɛr elame:r.

In words like *peuple*, *table*, the l resumes the voiced form if immediately followed by a vowel in the same group, thus: *la table est prête* latablɛprɛ:t. If the sound immediately following be a consonant, either an e is interposed, or, in rapid speech, the l is suppressed altogether, thus: *le peuple français* lœ pœplœ frɑ̃:sɛ, *boucle d'oreille* buk_lə dœrɛ:j or buk dœrɛ:j. Hence the completely voiceless l̥ is hardly ever found except at the end of a breath-group.

195. For the palatal lateral ʎ the tongue is in the position corresponding to c, j, n. It is the sound of the Italian *gl*, the Spanish *ll*, and the Portuguese *lh*. It is the old French 'l mouillé' in words like *cil*, *soleil*, *briller*, *souiller*, *piller*, and is still used in the Southern French and Swiss-French pronunciation of these words, thus: cœʎ, solœʎ, briʎe, suʎe, piʎe. In Northern French this consonant is no longer heard, these words being pronounced cœ:j, solœ:j, brije, suje, pije. There

are, however, some speakers who try to pronounce the real *l* mouillé, as it is the pronunciation usually recommended by grammarians; but they generally succeed very indifferently and pronounce *œlj*, *sœlj*, *brilje*, *sulje*, *pilje*, thus confounding words like *souiller* and *soulier*, *piller* and *pilier*.¹ The sound *ɛ* may be acquired by pressing the tip of the tongue against the lower teeth and at the same time trying to pronounce *l*.

196. The velar lateral *ʔ*, with tongue-position corresponding to *k*, *g*, *ŋ*, does not exist in French, but is found in Russian and in Polish. A kind of *ʔ* must have existed in old French, for instance in the plural of the word *cheval* which was probably pronounced *tʃəvaʔs*, later *ʃəvaus*, and has finally become *ʃəvo*.

197. *Rolled sounds*.—A rolled consonant is formed by one or more taps of an elastic organ which momentarily interrupts the passage of air, without however stopping it completely as in the case of a plosive. When there are several taps, as is usually the case, we may regard a rolled consonant as a very rapid succession of semi-plosives; but the ear does not easily distinguish this succession, and rolled consonants are treated in all languages in which they occur as simple sounds, and are frequently classed with the laterals.

198. In French there are two rolled sounds, *r* formed by the tip of the tongue against the upper gums or teeth, and *ʀ* formed by the uvula against the back of the tongue. But these two sounds do not exist independently; one or the other is used according to the locality or the individual: thus some say *ra:r*, others say *ʀa:ʀ*, and so on.

ʀ is found in the Northumbrian pronunciation of English and is known as the 'Northumbrian burr'.

199. *ʀ* was formerly unknown in France. Its origin is

¹ This pronunciation is very common in the case of the four words *cuillère* *kyje:r*, *kɥje:r*, *kylje:r*, *kɥlje:r*, *meilleur*, *aïlleurs*, *juillet*.—In Picardy the old *ɛ* has become *l*, thus: *sœlj*, *œl*, *famil*.

uncertain, but at any rate its use has so spread of late that at the present day *r* is practically never heard in the large towns; it is especially rare in Paris. But singers, public speakers, and actors still prefer it because it is a more sonorous and pleasant sound than *ʀ*, and less tiring to the throat.

In the country, even within twelve miles of Paris, and in the small towns, *r* is almost exclusively used, though the use of *ʀ* is rapidly spreading. On the whole *r* is probably still used by the majority of French people.

Many Southern English speakers have great difficulty in pronouncing *r*, and a still greater difficulty in pronouncing a clear *ʀ*. One or other of these sounds (preferably the former) is absolutely essential to a good pronunciation of French. There is no infallible method of acquiring either. The best way of obtaining *r* seems to be to pronounce *təda:təda: . . .*, making the *ə* as short as possible. This tends to change the *d* into an *r* formed by a single tap of the tongue, thus: *trə:trə: . . .*. When this point has been reached, the articulation of the fully rolled *r* becomes comparatively easy.

No French dialect has yet been found in which *r* and *ʀ* are both used, though some individuals use *r* and *ʀ* in different positions, thus: *muri:ʀ*, *kuri:ʀ*, *ge:ri:ʀ*.¹

In the localities where *r* is used, *ʀ* is known as *r grasseyé*; in other districts this term is employed to designate certain unpleasant varieties of *ʀ*, such as *ʀ*.

We shall write in future *r*. What remains to be said is also true of *ʀ* for those parts of France in which this form is used.

200. *r* is generally voiced, but like *l* it becomes voiceless in certain cases, thus: *quatre* *katʃ*, *poudre* *pudʃ*, *reparais* in rapid speech *ʒpare*, sometimes also *près* *pʀɛ*, *arc* *aʁk*. At the end of words it disappears still more easily than *l*. Phrases

¹ In certain Swedish dialects *ʀ* is used initially and *r* elsewhere, thus: *rara* *ʀə:ra*.

like *kat* person, *nottabl*, and even *notami* are frequently heard from very correct speakers in rapid conversation. In compound words such as *un quatre places*, *un maître d'hôtel*, the *r* is always dropped, thus : *œ katplas*, *œ metdotel*.

201. Other rolled consonants may be formed wherever there is a sufficiently elastic organ. For instance a bilabial rolled sound may be produced by keeping the lips loosely together and blowing strongly. This consonant (beginning voiceless and ending voiced) is sometimes used in French to express a sense of cold or disgust ; Danish coachmen use it to stop their horses. Breton drovers (at any rate in the neighbourhood of Pornic) also employ a bilabial rolled sound to urge on their cattle ; in this case, however, the tongue is at the same time placed in the position for *s*, giving a very peculiar effect. A rolled consonant may also be produced with the tongue against the upper lip. It has even been stated that the late Mr. Lecky, the well-known English phonetician, was able to produce a palatal rolled consonant, which seems incredible owing to the very limited elasticity possessed by the front of the tongue.

202. *Fricatives*.—The fricatives are formed by narrowing the air-passage at some point, so that the air escapes with a kind of fricative sound. As in the case of the plosives and other consonants, the fricatives differ according to the point where the narrowing takes place. But the differences in the fricatives are much more marked than in the case of the plosives, as we have already noted (§ 180).

203. The *bilabial fricative* *f*, *v*, formed by bringing the two lips close together and blowing between them, is the usual pronunciation of the Spanish *b* in *saber* *saver*, *v* in *nueva*, *nüeva*, the Flemish *w* in *wrocht* *vroxt*, the German *w* in *zwei* *tsvai*. This form of bilabial fricative does not exist in French ; there are, however, two bilabial fricatives in which the narrowing of the lips is combined with a narrowing in another part of the mouth. These may be called

compound consonants, in which, however, the lip-action predominates.

204. The first of these consonants *ɥ* is the *u* of *huile* *ɥil*, *huit* *ɥit*, *buis* *bɥi*, *luire* *lɥir*, *nuée* *nɥe*, *nuage* *nɥa:ʒ*. It is usually voiced, but may be more or less devoiced after voiceless consonants, as in *puis* *pɥi*, *fuir* *fɥir*. To form it, the lips are brought close together and the corners slightly contracted so that the lips are somewhat pushed forward; at the same time the front of the tongue is raised towards the hard palate as for *y* or more usually *ø* (§ 162). The fricative sound is very weak, so that this consonant is very like the vowel *y*¹ (see § 212).

205. The second bilabial fricative is *w* in *oui* *wi*, *ouest* *west*, *whist* *wist*, *loin* *lwē*, *doit* *dwa*. It is usually voiced, but becomes more or less voiceless in the same cases as *ɥ*, thus: *pois* *pwɑ*, *fois* *fwɑ*.² To form it the lips are brought together and the corners contracted so as only to leave a small round opening, the lips being well pushed forward; at the same time the back of the tongue is raised towards the soft palate as for *u* or more usually *o*. The fricative sound is weak, so that this consonant very much resembles the vowel *u*. The two sounds *ɥ* and *w* must be carefully distinguished by English students.

206. The *labio-dental fricative* *f*, *v* is formed by pressing the lower lip against the upper teeth, the breath being forced out between them, and between the interstices of the teeth: examples, *faim* *fē*, *bref* *bref*, *vin* *vē*, *cave* *ka:v*. The fricative sound of this consonant, unlike that of those just mentioned, is very marked. It may be voiced or voiceless in all positions.

207. There are many varieties of *dental fricatives*. The slightest movement of the tongue often produces a marked

¹ And still more like the vowel in the Swedish *hus*.

² The two forms exist independently in Northern English, thus: *witch* *wɪtʃ*, *which* *wɪtʃ* (usually written *mits*) or *hwɪtʃ*.

change in the sound, and on the other hand very similar sounds may be produced with different tongue positions. We distinguish in general four principal varieties, two of which exist in French.

208. The consonant *s*, *z* is usually formed in French by placing the tip of the tongue against the lower front teeth and the rims of the tongue against the upper back teeth ; the blade is raised towards the upper front teeth and gums, leaving only a narrow passage for the breath, which is thus driven against the teeth and escapes with a particularly penetrating sound, whence the name *sibilant* frequently given to this consonant. Examples : *sel* *zel*, *rosse* *ros*, *zèle* *zel*, *rose* *ro:z*.

This consonant is sometimes, especially in English, pronounced with the tip of the tongue raised towards the upper gums. The acoustic difference between the two modes of formation is practically negligible.

209. The consonant *ʃ*, *ʒ* is generally formed by raising the rims of the tongue as for *s*, *z*, and raising the tip and the blade of the tongue towards the gums and hard palate, leaving a shorter and wider passage for the air than in the case of *s*, *z*. Examples : *chou* *ʃu*, *vache* *vaʃ*, Jean *ʒə*, *cage* *ka:ʒ*. In English the sounds *ʃ*, *ʒ* are often pronounced with lip-rounding.

210. In English we have two other dental fricatives : (1) *θ*, *ð*, the sounds of *th* in the English *think* *θɪŋk*, *then* *ðen* ; this *θ* is approximately the sound of *s* in the Spanish *razon* *raθon*. This consonant is formed by placing the tip of the tongue between the teeth or against the upper teeth, the breath being forced out between them and between the interstices of the teeth.¹ Although this sound does not exist regularly in French, it is frequently heard as a defect in pronunciation, replacing *s*, *z* ; this defect is also heard in English and is

¹ We see therefore that the formation of *θ*, *ð* does not differ greatly from that of *f*, *v*. It is thus that the French often hear *fri*, *vis* for the English *three*, *crij*, *this* *ðis*.

known as *lipping*. (2) *ɹ*, the fricative (not rolled) *r* of Southern and American English. This consonant is formed by raising the tip of the tongue towards the gums, without, however, raising the blade as for *ʃ*, *ʒ*. In some dialects the tip of the tongue is even slightly turned back so that the under surface of the tongue faces the teeth.¹

There are many other varieties of dental fricatives. In Polish there is a palatalized *s*, which has a sound intermediate between *ç* and *ʃ*. The Bantu languages, Shironga and Shitshonga, of the Transvaal, possess a very piercing labialized *s*. In Circassian (Caucasus) there is a fricative consonant pronounced with the lips well apart, the teeth closed, and the tongue flat; this sound is intermediate between *ʃ* and *f*.

211. The *palatal fricative* *ç*, *j* is formed by raising the front of the tongue so as nearly to touch the hard palate, and forcing the breath through the narrow channel thus formed. The voiced form is found regularly in French, as in *yak jak*, *hyène jɛ:n*, *bien bjɛ̃*, *paille pa:j*, *médaille meda:j*. Like *ɥ*, *w*, and the liquids, *j* may become more or less devocalized before or after a voiceless consonant, as in *piet pje*, *feuilleter fœʃte*. *ç*, the fully devocalized form, exists independently in German, as in *ich ɪç*.

212. The three consonants *ɥ*, *w*, and *j*, which only exist in French regularly in the voiced form, differ from the other fricatives in that the fricative sound is very weak. This is sometimes so noticeable that they frequently sound like

¹ A whole series of consonants, known as *inverted*, may be formed thus with the tip of the tongue raised and curled backwards. They are frequent in Sanskrit; also in Swedish and Norwegian, where all dentals are so pronounced when preceded by *r*, as in *barn bær̥n*, *först fœ̥rst*. The inverted *s* resembles *ʃ* in sound. In American English an inverted *r*, often accompanied by lip-rounding, is the usual pronunciation of *r* before consonants, as in *heard he:ɹd*, *first fe:ɹst*, *nurse ne:ɹs*; the same thing occurs in the dialects of the south-west of England.

consonantal vowels (§ 106). But when they are pronounced voiceless, the fricative sound is still sufficiently marked (at any rate in Northern French) to justify their inclusion among the consonants. They might be called *semi-vowels*, but this would complicate the classification, especially as the three classes of liquids would have to be placed under this head.

213. The *velar fricative* χ , g does not exist in French. χ is the sound of *ch* in the Scotch *loch* lox , Welsh *chwi*, and German *ach* pax , of *j* in Spanish, of *c'h* in Breton, &c.; varieties of g are found in the North German *wagen* $\text{va:g}\bar{\text{e}}\text{n}$ (also $\text{va:g}\bar{\text{e}}\text{n}$), the Danish *Aage* $\text{o:g}\bar{\text{e}}$, the Spanish *luego* luego , and the Dutch *goed* gut .

214. The *uvular fricative* ɣ , ʁ does not exist regularly in French. ɣ is the Arabic *kha* in *khalifa* xalifa , and is found from time to time in German and Dutch, and frequently in Spanish replacing χ . ʁ is the Arabic *ghain* in *ghabara* xabara 'dust', and the Danish *r* in *ro* ro . In the pronunciation of the younger generation of Parisians ʁ is frequently replaced by r , thus: *rare* ra:r , *poutre* putr . This pronunciation is considered incorrect, and is often termed *grassement*, the name originally given to r to distinguish it from ʁ . This r differs slightly from the Danish *r* and from the Arabic *gh*.

Arabic contains other fricatives which are now generally supposed to be produced by contraction of the windpipe or bronchial tubes.¹

215. The glottal fricative h is the fricative sound produced as the air passes between the vocal chords. h is hardly heard as an independent sound when the force of the breath is weak.

216. This sound only exists regularly in certain parts of France, e.g. Normandy, Lorraine, Gascony. In these provinces *la halle*, *une haute montagne* are pronounced *lahal*,

¹ See Dr. Sweet's article in the *Maitre Phonétique* for May, 1906, and *Primer of Phonetics*, p. 12, 3rd edition. (Oxford, Clarendon Press, 1906.)

yn ho:t mō:tap. Elsewhere, and notably in Paris, the so-called 'h aspiré' is merely a symbol signifying that liaison and elision do not take place: thus *le haricot*, *les haricots* are pronounced *leariko*, *leariko*.¹ h is, however, sometimes pronounced even by Parisians, when the following vowel is stressed, e.g. *là haut laho*; but this is done unconsciously to avoid the hiatus, and often takes place where no h is written, thus: *fléau flého*, *Européen céropehẽ*, *cent un sãhõs*, *réel rehẽl*. In the interjections *aha aha*, *oho oho*, &c., the h is always pronounced.

In this book the Norman pronunciation will be considered as normal, and accordingly the 'h aspiré' will be represented by h.

The English and German h is a source of great difficulty to Parisians; sometimes they leave it out, and sometimes they put it in between two vowels where it is not required, i.e. they 'scatter their h's'. It is for them the most difficult of all the sounds occurring in these languages, with the exception perhaps, for some individuals, of r or ʀ and ŋ.

217. Consonants, like vowels, have a fixed pitch; it is possible to determine the fundamental note and some of the accessory notes. These investigations offer great difficulties, and, since the results are not of the same importance as in the case of the vowels, we will not consider them further here. We may notice, however, that the consonants j and s have a high pitch, and the consonants w and x a low pitch.

VOWELS AND CONSONANTS

218. We have seen (§ 212) that there is a close relation between certain vowels and certain consonants, for instance between i and j, which are generally represented in French by the same letter i, thus: *nid ni*, *bien bjẽ*. In fact the

¹ Children say *lariko*, *lezariko*, and this pronunciation, which would have become general long ago but for the influence of the school-room, will no doubt eventually supplant the other.

only difference between i and j is that in the case of the vowel the air-passage, though narrow, is not sufficiently so to produce a marked fricative noise, so that the sound of the voice predominates; for j, on the contrary, the air-passage is still narrower, so that the fricative noise predominates over the sound of the voice.

219. The same relation holds good in the case of u, w and y, q, that is to say between the closed vowels and the corresponding fricatives, frequently called semi-vowels.

The table of French sounds at the beginning of the book shows this relation clearly.

ACCESSORY SOUNDS

220. Under this head we include various kinds of sounds which do not occur regularly in speaking, at any rate, in the principal European languages.

Inverse Sounds

221. We will first consider *inverse sounds*, formed by drawing air into the lungs instead of breathing it out. There is, of course, a whole series corresponding to the normal sounds; but as the vocal chords do not vibrate easily during inspiration, voice is nearly always replaced by breath or whisper. Inverse sounds are represented by placing * immediately after the symbol for the normal sound.

222. Inverse consonants are often found in French as interjections: thus f* indicates pain, l* pleasure. The word *oui* wi pronounced in a tone of doubt becomes w*^qi* or w*^qj*; similarly in English, *yes* jès sometimes becomes j*^qè*s, the s remaining normal.

Clicks

223. There is also a series of clicks of the tongue and lips; these may also be represented by p*, &c. Clicks are sometimes used in French as exclamations: t* is a very

frequent expression of impatience; c^* , $c^*\zeta^*$ and t^*l^* are used for urging on horses. In kissing p^*f^* , p^*w^* , or p^*r^* is pronounced. Clicks form an integral part of the Hottentot and Kaffir languages, as in the proper name *Cetewayo* $t^*etjua:jo$. In Zulu there are three clicks, t^* , c^* , and k^* , which are probably borrowed from the Hottentot; these have been adopted in turn in the Sesuto language. The missionary Dieterlen states that the language of the Bushmen contains no less than seven clicks.

The inverted click ɿ^* is particularly sonorous, and has this peculiarity that its pitch is easily recognizable and may be varied considerably by very slight variations in the position of the organs.

It is not always easy to distinguish between inverse sounds and clicks. We may notice, however, that in a click the air only passes from one part of the mouth to another part of the mouth or into the pharynx, and does not descend below the glottis; and, in the case of the clicks formed entirely in the mouth, there is nothing to prevent the vocal chords vibrating *during the click*. It is thus possible to sing (without words) and pronounce certain clicks at the same time. Clicks are usually accompanied by a musical sound produced by the articulating organs. This is especially noticeable in the case of kissing.

Whispered Sounds

224. The use of whisper instead of voice is exceptional in ordinary speech. It occurs not infrequently in French when there is a marked falling inflection at the end of a sentence. In such cases the last syllable is often whispered (§ 138).

Whispered vowels are regularly used in Portuguese, in certain American languages, and in Malagasy. In the latter language examples are very numerous, thus: $a'om\text{ɿ}$ 'cow', $\text{bet}\text{ɿ}m\text{ɿ}'s:ar\text{ɿ}k\text{ɿ}$ the name of a tribe, and the borrowed word $k\text{ɿ}'rais\text{ɿ}t\text{ɿ}r\text{ɿ}$ 'Christ'.

Whistling

225. Whistling is also an accessory sound of language, as it is sometimes used to convey some meaning. It is a musical sound produced by the lips.

A whistle may be nasalized, but there is nothing striking in the acoustic effect of the sound thus produced.

It is possible to whistle and sing at the same time. One of the translators is able to perform a duet, singing one part and whistling the other.

COMBINATION OF SOUNDS

GLIDES

226. The sounds which we have considered may be joined together and combined in all kinds of ways. Many of these combinations, however, cannot be made without producing intermediate sounds: thus if we say *ba*, *b* is pronounced with the lips closed and *a* with the mouth wide open; there is therefore necessarily an instant between the two during which the lips are slightly open, i.e. in the position for the production of *v*. If the lips are opened quickly, this *v* is not heard; but if they are opened very slowly, a weak *v* may be noticed, or more accurately, a succession of all the sounds intermediate between *b* and *a*. Between *n* and a vowel a real *j* is usually thought to exist by those who have not had any phonetic training.

Similarly after final consonants, especially after plosives, breath or voice continues for an instant after the articulation of the consonant; thus in French *ak* is followed by a momentary *h*, and *ag* by a momentary *ɑ*.

227. The sounds thus produced are called *glides*. In the rare cases in which it is necessary to represent them they are put in square brackets, thus *b[v]ɑ*.

228. *On-glides, off-glides*.—A complete sound really consists

of three parts: (1) the *on-glide*, or the sound produced while the organs are being placed in position for the given sound; (2) the *stop*, produced while the organs are in position; and (3) the *off-glide*, or the sound produced while the organs are leaving the position of the given sound to take up some other. Thus in the case of the sound *b* the on-glide is produced while the lips are being closed, the stop while they remain closed, and the off-glide while they are being opened. In the case of double consonants (§ 126) the on-glide is separated from the off-glide by an appreciable interval.

229. Glides are accessory sounds produced involuntarily in the articulation of given sounds. It is therefore unnecessary in general to represent them: there is no need to write for instance *pat*^[h] for *pat* because the ^h is pronounced involuntarily.

It may, however, be useful in some cases to indicate whether the glide is voiced or voiceless, that is to say, to mark the point at which the vocal chords begin or cease to vibrate. In the French words *robe*, *aide*, *figue* the off-glide of the final consonant is in each case voiced thus: *rob*[*ɔ*], &c. This is the reason why many people think they hear the final *e* mute in such words. One of the commonest faults of Englishmen, Germans, and Scandinavians speaking French is that they pronounce these glides voiceless, or nearly so, thus: *rob*^[h], &c.

As regards the initial voiced plosives the question is more complicated. The on-glide, if it can be said to exist at all, is always voiceless, e.g. in the case of *b* the voice is not heard before the lips are actually closed.

In French the voice begins at the commencement of the stop, that is, in the case of *b*, at the instant at which the lips meet, and is continued throughout the stop and the off-glide.

In English the voice generally begins towards the end of

the stop, and sometimes not until the explosion itself, i.e. the commencement of the off-glide.

This may appear a point of small importance, but nevertheless the acoustic difference is very marked and may even affect the meaning of words. The French formation has somewhat the effect of *mb*, *nd*, *ng* to English ears, e.g. the French word *bas* sounds to an Englishman rather like *mba*. When the consonants in the word *dogue* are pronounced as in the English *dog*, a Frenchman might understand *tak*.

The correct pronunciation of the French initial *b*, *d*, *g* may be acquired by pinching the nose and at the same time trying to say *mba*, *nda*, *nga*. Of course this does not give the French *ba*, *da*, *ga* accurately, but it gives a sufficiently close approximation to enable the student to master the formation of the true sounds.

230. When one sound follows another the same glide is the off-glide of the first and the on-glide of the second: thus in *pa* the off-glide of *p* is the on-glide of *a*.

Here, too, it may be useful to mark the point where the sound of the voice commences, i.e. to indicate whether *pa* stands for *p[h]a* or *p[ɔ]a*. In French the glide between a voiceless plosive and a vowel is voiced. In English and German it is voiceless. The difference is very marked. When a Frenchman says *tard* *t[ɔ]a:r* a German or a Dane might easily take it for *da:r*. If he were to pronounce it thus in imitation and were corrected he would probably say *t[h]a:r*; this pronunciation is also incorrect and sounds to a Frenchman almost like *tɕa:r*.¹

¹ Some German professors, when they wish to make this difference clear to their pupils, show them that when *pa* is pronounced as in German with a lighted match in front of the mouth the match is extinguished, and that this does not happen when *pa* is pronounced as in French. This is a very pretty experiment, but it is inaccurate: when the author pronounces *pa* the match is extinguished. The force of the explosion is very nearly if not quite as great as in German, but the vocal chords begin to vibrate earlier.

These voiced off-glides of voiceless plosives are a source of great difficulty to English students. The best way of acquiring them is to pronounce *bɑ*, taking care not to produce any voice before the explosion. The result will be *p[ɑ]* but with a very weak *p*. When this is acquired the force of the breath must be gradually increased until the normal force of a *p* is reached. This gives the French *pɑ*; the French *tɑ* and *kɑ*, which are slightly more difficult, may be similarly obtained by starting from *dɑ* and *gɑ*.

231. When two consecutive sounds are articulated in the same place, there is practically no glide. In the words *hanneton* *hantɔ̃*, *enter* *ɛ̃tə*, the glide between *n* and *t* is produced while the velum, which is lowered for *n*, is being raised for *t*. The opposite is the case in *des tenailles* *dɛtɛnɔ̃j*, *Etna* *ɛ̃tɛnə*. In *atteler* *atle*, *atlas* *sɛtlas* the glide is formed by a lateral explosion of the *t*; this explosion is very similar to that in the combination *kl* as in *bâcler* *bɑ:kle*, *booklet* *bùklit*. In groups like *ts*, *tʃ*, the fricative *s* or *ʃ* may be considered as the off-glide of the *t*; the connexion between the plosive and fricative in such cases is so close that those who are not phonetically trained are apt to consider the combination as a single sound.¹

232. Between two consonants which are not articulated in the same place a glide must necessarily exist if both consonants are completely pronounced: thus in French, *acteur*, *Bagdad* are usually pronounced *ak^[h]tœ:r*, *baɡ[ɑ̃]dad*.

It is possible, however, to join two sounds of this kind without a glide. If we pronounce *une petite* *ynptit*² the lips are closed for the *p*, and while they are in this position

¹ The English usually consider *tʃ* and *dʒ*, as in *cheese* *tʃi:z*, *jar* *dʒɑ:*, as single sounds; so also do the Italians, the Spaniards, and the Vosgiens; the Germans and the Italians do the same in the case of *ts* and *dz*.

² The more usual pronunciation is *ynpetit*.

the tongue is put into the position for *t*; the lips are then opened without explosion, and it is only the off-glide of the *t* that is heard. This mode of formation is frequent in English and German; in the English word *actor* æktə the group *kt* represents the on-glide of a *k* and the off-glide of a *t* (compare the French ak^[h]tœ:r). In French this formation is unusual: the English æktə sounds like attœ to French ears.

One effect of these glides between consonants is that, in French, the combination of several consecutive consonants is avoided. Thus instead of *ynptit* the fuller form *ynpētīt*, or (in rapid conversation) the shortened forms *ymtit* or *yntit* are more often used.

233. It frequently happens that a glide is reinforced and becomes an independent sound as the result of inaccurate imitation. Thus many people pronounce *renje* instead of *ren[j]e*; most Frenchmen from the North of France who try to imitate the 'l mouillé' of the Southern French and French-Swiss pronunciations say *sulje* for *suΔ[j]e*. The same phenomenon has often occurred in the history of language. The Norwegian t^[h]ɑ:lə 'to speak' has become *thɑ:lə* (almost *tʰɑ:lə*) in Danish; a verb of the same origin has become *zählen* *tsɛ:lən* in German, where the English has *tell* t^[h]əl. Similarly the German *pfund* *pfunt* reinforced from *prunt* corresponds to the English *pound* p^[h]aʊnd.

ASSIMILATION

234. Two consecutive sounds always tend to assimilate one another, that is, one of them borrows some part of the characteristics of the other, so as to avoid as far as possible a sudden change in the position of the organs. *k* has not precisely the same sound in the three combinations *ku*, *ka*, *ki*: it is pronounced with the tongue more or less advanced, the lips more or less rounded or spread, &c.

235. The most important assimilation in French is that which occurs between voiced and voiceless consonants, as in *médecin* mɛtsɛ̃, where t has replaced d on account of the s which follows; similarly in *observer* ɔpsɛrvɛ, *anecdote* anɛɡdɔt. This assimilation is regressive in French, that is to say the first consonant is influenced by the second and not vice versa: thus *second* sɛɡɔ̃ becomes zɡɔ̃ and not skɔ̃.

It is, however, progressive when the second consonant is a liquid or one of the 'semi-vowels' ʎ, w, j: thus *piéd*, formerly pie, has become pʝɛ. The assimilation is also sometimes progressive in the group ʃv, thus: *le cheval* lɛʃvɑl.

In English assimilation is sometimes progressive, as in *observe* əbzɜ:v, sometimes regressive as in *cupboard* kʌbəd. No rules can be given; compare əbzɜ:v with *absurd* əbsɜ:d.

236. Assimilation is never complete in French, unless it occurs in the middle of a word or in a group of words so closely connected by the sense that it may be treated as one word, as *chauve-souris* ʃo:fsuri, *chemin de fer* ʃɛmɛ̃tʃɛ:r, *garde champêtre* ɡartʃɔ:pɛ:trɛ, *chapeau haut de forme* ʃapo hotform. When it occurs between one word and another it is only partial: in a phrase like *je viens de saluer* ʝɛvjɛ̃dsalɥɛ the d does not become a t but merely a more or less devocalized ɔ̃. A devocalized ɔ̃ is not quite the same thing as a t, being pronounced with much less force: thus the above sentence would not be confounded with *je viens te saluer* ʝɛvjɛ̃tsalɥɛ. This ɔ̃ varies with individuals, being sometimes nearer to t and sometimes nearer to d. Similarly *une tasse de thé* is not quite yntɑ:zɔ̃tɛ; the s becomes more or less vocalized before the d and may be written ʒ. We might always write ʝɛvjɛ̃dʒparle, yntɑ:ʒɔ̃tɛ, &c., but in a practical phonetic transcript it is hardly necessary, as these assimilations are understood in all such cases.

237. Another very common assimilation in French is the modification of dental and velar consonants before front

vowels and palatal consonants. In some dialects it is so marked that confusion between dental and velar consonants may arise: thus *piqué* pike and *pitié* pitje both become pice. Similarly *manier* may be confused with *Magnier*, and *Anio* with *agneau*.

238. The nasalization of a vowel before a nasal consonant is not unfrequently heard in French and in English, thus: *moi-même* mwamē:m, *man* mæn. These forms are, however, dialectal. In the word *Maman*, however, this assimilation is general, thus: māmā.

Even consonants are sometimes nasalized: thus *branlant*, *rongeant* may become brā:lā, rō:žā. *Revenir*, *avenue*, and especially *en venant* are frequently pronounced with a nasalized *ṽ*; but since the air escapes more easily through the nose than between the teeth the *ṽ* becomes a sort of labiodental m, and the words may be written rēm^ṽni:r, am^ṽny, ām^ṽnā.

When a plosive is nasalized in this way it becomes an ordinary nasal consonant. *Pendant* is often pronounced pāndā, *vingt-deux* vēndø, &c. This assimilation nearly always takes place when the plosive is between a nasalized vowel and a nasal consonant, thus: *une tombe neuve* yntōmnø:v, *point de mire* pwēmni:r, *lendemain* lānmē,¹ *une longue main* ynlōŋmē.

239. The forms ymtit, yntit for ynptit, s:epa for gsepa, &c., are of course due to assimilation. There are a great number of others, especially in popular speech. We may say generally that every sound is influenced to a certain extent by the sounds next to it.²

¹ It is perhaps a reaction against this form that has given rise to the dialectal lōrdēmē.

² An assimilation which English speakers are apt to make is that of *j* under the influence of dentals: thus *education* ədju:kəɪʃən is often pronounced ədgu:kəɪʃən, *did you* did juw in rapid speech sometimes becomes did guw. These assimilations must be carefully avoided in French. *Adieu* is ədʒø not ədʒə, *question* is kɛstʃø not kɛstʃə.

ELISION

240. Closely connected with assimilation is *elision*, that is, the total suppression of a sound in certain combinations. Thus the expressions *I have seen him*, *he is there* are often pronounced in rapid speech *aiv sijnim*, *hijs t̃eə*. A Frenchman does not say *lə ami*, *la ekol* but *lami*, *lekol*.

These particular elisions in French are recognized by grammarians, but there are in ordinary speech many others of which no account is taken in the spelling.

241. The most common elision in French is that of *ə*. This sound is regularly dropped unless its omission brings two consonants together at the beginning or three consonants in the middle of a group: thus *cheval* is pronounced *fəval* but *mon cheval* *mɔ̃ fval*. But combinations of two consonants at the beginning and of three in the middle of a group are common when the last consonant is a liquid or a semi-vowel, thus: *pelote* *plɔt*, *dans le puits* *dɑ̃ l pui*. There may even be four consonants together in this case, as in *je le crois* *ʒə l kʁwa*.

In rapid familiar conversation *ə* is dropped still more often. Sometimes as many as four consonants are found initially, for instance: *je crois bien* *ʃ kʁwa bjɛ̃*.

The sound *ə* is *fixed* in only a very few words, for instance: *premier*, *crever*, *bretelle*, *porte-plume*, *gouvernement*, *Courbevoie*, *Tournefort* *turnɛfɔ:r* (but *tourne fort* *turn fɔ:r*).

242. In familiar conversation there are many other elisions. Formerly the *l* of *elle* *ɛl*, the *r* of *sur* *syr*, and the *k* of *avec* *avɛk* were regularly elided before a consonant. At the present day these elisions scarcely take place except in order to save a syllable, thus: *elle ne croit pas* *ɛnkrwapa*, *sur le banc* *syldb̃*; but even here they tend to disappear.

243. There are two elisions which are sanctioned by the spelling and are used in reading, but which are not usual in

speaking: these are the elisions of the *i* of *si si* and the *a* of *ça sa*. We find in books *s'il vient*, *ç'aurait été*, which are read *silvjě, soretete*; but the more usual pronunciation in speaking is *si i(l) vjě, sa oret etc.*¹

LIAISON

244. In French, as we have seen, combinations of several consonants are avoided and open syllables are preferred to closed syllables. One effect of these tendencies is that a great many final consonants which used to be pronounced have disappeared. Thus the word *tout* was formerly pronounced *tut*; now it is usually pronounced *tu* as in *tout le monde tulmō:d*, *c'est tout setu*. But when such a word was followed by a vowel, there was no reason for dropping the final consonant; it has therefore remained in modern French, thus: *tout homme tutom*.

Now since the word *tout* is more often found before a consonant or at the end of a group than before a vowel, the form *tu* which was originally a form due to elision has become normal; the form *tut* is now only employed occasionally to avoid a combination of two vowels. Similarly in English we say *a man* *e mæn*, but *an animal* *ən æniməl*. The form *a* is normal, but the form *an* is still used to avoid the combination of two vowels.

This is the origin of the *liaisons* so frequently met with in French: thus *les chevaux* is pronounced *leʃvo*, but *les hommes* *lezom*, *un grand chien* *œgrāʃjě*, but *un grand homme* *œgrātōm*.

245. In liaison plosives are nearly always voiceless and fricatives are nearly always voiced, thus: *un long hiver* *œlōkivɛ:r*, *un gros homme* *œgrozōm*.

After nasalized vowels an *n* reappears in liaison and the vowel sometimes loses its nasality: thus *un homme* is pronounced *œnōm* or *cenōm*.

246. The form of masculine adjectives in liaison is gener-

¹ But *s'il vous plaît* is usually pronounced *sivuplɛ*.

ally the same as that of the corresponding feminine adjectives, except that plosives are devocalized and fricatives are vocalized, as noted above, thus: *beau bo*, feminine *belle bel*; *un bel homme* čebelom;—*grand grđ*, feminine *grande grđ:d*; *un grand homme* čegrđtom;—*faux fo*, feminine *fausse fo:s*; *un faux ami* čəfozami.

There are very few exceptions. We may note the following: *franc frđ*, feminine *franche frđ:f*; *un franc étourdi* čfrđketurdi;—*malin malě*, feminine *maline malin*; *malin esprit* malěnespri;—*divin divě*, feminine *divine divin*; *divin appel* divěnapel;—*commun komčə*, feminine *commune komyn*; *commun accord* komčənakor.

247. The use of liaison varies with individuals and with the style of speaking. It is employed much more frequently in reading aloud, &c., than in familiar conversation; teachers, professors of elocution, and, still more, half-educated people introduce liaisons wherever possible. The last-mentioned class frequently make mistakes and introduce a *z* or a *t* in the wrong place; a fault of this kind is known in French as *un cuir*, or *un velours*.¹

248. In ordinary conversation liaisons only occur between words which are closely connected in sense. The following are the principal cases:

(a) Between an article and a noun or an article and an adjective: *les hommes* lezom, *un ami* čənamı, *les autres personnes* lezotreperson.

(b) Between an adjective and a noun: *le grand ours* legrđturs, *deux petits enfants* dəptisč:fđ, *mon ami* mđnamı.

(c) Between a numeral and a noun or a numeral and an adjective: *deux animaux* də:zanımo.

(d) Between an adverb and an adjective or another adverb: *très utile* trəzytil, *trop idiot* trəpidjo.

(e) Between the pronoun and the verb or another

¹ 'J'évite les liaisons. C'est prétentieux . . . et dangereux.' Labiche, *La Grammaire*.

pronoun: *il entend* ilǣ:tǣ (compare *il voit* i(l)vwa), *nous arrivons* nuzari:vǣ, *on écoute* ǣnekut, *j'en ai* gǣne; *vous en avez* vuzǣnave; *nous y venons* nuzivnǣ, *en y pensant* ǣnipǣ:sǣ.

(f) Between the verb and its pronoun: *a-t-il peur* ati(l)pǣ:r, *vas-y vasi*, *prends-en* prǣzǣ.

(g) Between a preposition and the word it governs: *sans abri* sǣzabri, *en écoutant*, ǣnekutǣ.

(h) After the conjunction *quand*: *quand il viendra* kǣti(l)vjǣ:dra. This liaison is not, however, usual when *quand* is used interrogatively: thus *kǣ et vu vny* is more frequent than *kǣt et vu vny*.

(i) After various parts of the verbs *être* and *avoir*, especially when used as auxiliaries: *il est ici* iletisi, *il était arrivé* iletetari:ve, *ils ont appris* i(l)sǣtapri.

(j) In various common phrases which are treated almost as single words: *mot-à-mot* motamo, *pot-au-feu* potofǣ, *piéd-à-terre* pjetatǣ:r, *de temps en temps* detǣsǣtǣ.

Liaison does not take place before numerals, thus: *les onze* leǣz, *les trois huit* letrwǣqit, *cent un* sǣǣ.

In the French-speaking parts of Switzerland liaison is much more frequently employed than in the North of France. For this reason the Swiss pronunciation always sounds to a Parisian somewhat affected.

THIRD PART

THE REPRESENTATION OF LANGUAGE

PRINCIPLES

249. We have now determined the principal elements of which the French language is composed. It remains to discuss how they may be represented in writing.

A moment's consideration shows that it is impossible to represent accurately all the elements of language. We have described fifty-two sounds, excluding many of the finer distinctions which could obviously not be represented adequately by any practical alphabet. Then there are stress, length, and, above all, pitch and inflection; it is impossible to represent these except in the roughest manner. Rapidity of enunciation might be indicated by increasing and diminishing the distances between consecutive symbols, and quality of tone by placing some special sign at the beginning of each sentence; this would, however, be very complicated. Gesture cannot be represented at all, and this alone is sufficient to render it impossible to indicate by means of writing all that is expressed by speech.

250. On the other hand writing may mark certain distinctions of meaning which speech does not. Thus division into words, which does not correspond to any regular phenomenon in speech, may be easily observed in writing and may be very useful in making the sense clear. Similarly various symbols may be used in writing, such as italics, inverted commas, hyphens, &c., none of which corre-

spond to anything regular in speech. Writing has therefore advantages to compensate for its imperfections as a phonetic representation of language.

Writing ought therefore to be *a compromise between the requirements of sense and of phonetic representation.*

251. Then the question arises how far writing ought to be bound by these requirements. This depends on the object of writing. If the object is *scientific*, as in the study of philology, the phonetic representation must be made as accurate as possible and the requirements of sense may be disregarded. All shades of sound for which symbols can be found must be represented, their length indicated, and combinations of them divided into breath-groups and stress-groups and not into words; and finally the inflection must be marked as far as possible.

252. But in a system of *practical* spelling such as might be used in learning to read or in teaching foreign languages, or which might even replace our ordinary spelling, other principles would be adopted.

Writing of this kind must be *clear* and *simple*. Instead of representing as accurately as possible all the elements of speech, only *those of which the values may affect the meaning* need be represented.

253. Applying this principle to the representation of the French language, we must ask ourselves first which sounds ought to be represented. We have described fifty-two distinct sounds, but many of the distinctions are quite unnecessary for making the meaning clear. Thus the distinction between the voiced and voiceless *j* is absolutely unnecessary from this point of view; no Frenchman could pronounce without great difficulty combinations like *pje* with a voiced *j* or *bjě* with a voiceless *j*, and students of the French language may be told once for all that *j* is more or less devocalized after voiceless consonants. *j* is therefore written in all cases. The same applies to *w*, *q*, *l*, *r*, &c.

Of the vowels è may be replaced by e or by ε, ò by o, and à by a or α. It is, however, necessary to distinguish some sounds which are very similar, for instance w and u, because their values may affect the meaning as in *Louis* lwi, *lui* lqi; similarly the consonants w, u, j must be distinguished from the vowels u, y, i in order to avoid confusion between words like *roui* rwi and *rouille* ru:j, &c.; a special symbol is used for e on account of certain rules of stress and in order to distinguish *le retour* lə rtu:r from *leur tour* lœr tu:r, &c.

In this way the number of distinct French sounds may be reduced to thirty-seven, viz. p, b, t, d, k, g; m, n, ŋ; l, r; ʁ, w, f, v, s, z, ʃ, ʒ, j, h; u, o, ɔ, a, ε, e, i; œ, ø, y; e; ɔ̃, ẽ, œ̃. These are the sounds which characterize Northern French pronunciation.

In the case of French texts written for English readers, or in fact for any foreign students of the French language, it is well sometimes to mark certain distinctions which would not be necessary for French readers: thus it is useful to write ʃ and not l in words like *peuple* pœpʃ, where an Englishman would naturally pronounce pœ-pl in two syllables, like *people* pijpʃ. But even peculiarities of this kind may be stated once for all in simple rules.

254. Elements of language other than sounds can only be very roughly indicated. We mark long and half-long vowels by the same symbol, and we neglect in general the length of consonants, since this is implied by their position (§ 124).

We retain word divisions for the sake of clearness, and we do not mark the stress when it is normal¹; even when it is shifted we only mark it when absolutely essential. Stress-groups are not indicated at all; breath-groups are separated by punctuation-marks, and these symbols, which

¹ The stress is, however, given in the texts on pp. 108 and 112.

are shown by experience to be of the greatest use, are sufficient to indicate to a certain extent the inflection (§ 140).¹ Of course glides are entirely disregarded.

A marked rise in pitch might be indicated by *italics*, and a diminution in the rate of speaking by *thick type*.²

255. Finally, to avoid confusing the reader by writing the same word in several different forms (for the eye sees a word as a whole rather than as a succession of letters), we only indicate the most marked changes of form, such as contractions, assimilations, elisions; that is, we give every word its *normal* form wherever possible. But of course there is nothing to prevent us marking characteristic abbreviations in representing a conversation, if we desire to do so.

256. In this way we obtain a rational system of orthography which has all the advantages of ordinary spelling, but which is far more accurate and infinitely easier to learn. It might therefore be substituted with advantage for the ordinary spelling. If custom still opposes the introduction of such a system into current literature, it might nevertheless be used for teaching children and illiterate persons to read, for teaching deaf-mutes to speak, and for teaching the French language to those who do not speak it as their mother tongue. The author has made use of this system for many years in his private correspondence with many of his colleagues of the International Phonetic Association; its

¹ It would, however, be useful to place notes of interrogation and exclamation *at the beginning as well as at the end* of sentences, as is done in Spanish.

² Owing to our imperfect knowledge of the accessories of language, as distinguished from the formation of the sounds themselves, and owing to our limited means of representing them, we are necessarily unable to indicate them more precisely than by the means mentioned above. A closer approximation would be desirable in numberless cases; this may be seen by noticing the very different impressions a sentence may make when read in two different ways. In Appendix A an attempt has been made to represent accurately the inflection of a text.

employment effects a great saving of time owing to the absence of mute letters.

SPECIMENS

257. We will now give a few specimens of texts in phonetic transcription. They are chosen to illustrate various styles of pronunciation.

It may be well to give a word of warning to those unaccustomed to phonetic transcription. When a phonetic text is being deciphered, and therefore read very slowly, the pronunciation of many words and phrases may sound vulgar, incorrect or affected. It must be remembered that the following texts are intended to be read at the rate indicated in the headings.

The best way of testing whether the pronunciation here given is correct, is for a person who can pronounce the sounds to take a piece and learn it until he can read it quite fluently; he should then read it aloud to an unprejudiced person, taking care not to read too slowly, and ask if the pronunciation sounds in any way peculiar. The probability is that it will not.

Of course the reader may not always find the pronunciation to be that with which he is familiar. The pronunciation of French, as of all other languages, is very variable. It differs from one individual to another even in the same family.

It is an extraordinary fact, that it is very difficult for a person to know how he pronounces. Even those who have made a study of the subject are apt to make mistakes; and others have not, as a rule, the slightest idea of how they speak. On one occasion when Prof. O. Jespersen was in France, the author and his brother, M. Jean Passy, were discussing with him the characteristic forms of spoken French. M. Frédéric Passy, the father of the other two, was listening, and strongly disagreed with his sons on many

points; he would not admit, among other things, that *il* is pronounced *i* before consonants, and finished by exclaiming *mœajø jespersen, i n sav pø s k i di:z*; thus showing, in spite of himself, that the assertion was correct.¹ More recently the author was reproached by his father for transcribing *parce que* as *paske*, on the ground that it was incorrect, '*paske ø n di pø paske*.'

Similarly the statement that French people do not pronounce all the *e* mutes when reciting poetry is often disputed; if, however, a French person be asked to recite, it will be observed at once that he drops a great many of these *e* mutes.

1. TEXTS IN CONVERSATIONAL PRONUNCIATION

le ju

dø garsø, zo:zef e benwa, pø:se ø gu:r prs d ø potage u i j ave de ju syperb.

'regarde dø ø pø,' di zo:zef, 'ø vwala de bo ju! i sø vremø mapifik!'

'ty tru:v?' di benwa. 'i m sø:blø k i n ø rjē d bjē rmarkabl. z øn e vy, mwa, de ju! mō se:r, ø fezø mō tu:r de frō:s, z e vy ø ju ki ets gro kom la me:zø k ty vwa labø.'

'sa m etøn,' di zo:zef. 'purtø, ø vwa de joz si dro:l! kō z ets jo:drøje, nuz avø travaje a ø jo:drø ki ets grø kom l egli:z.'

'ty t mōk de mwa,' s ekri benwa; 'keske ty vudre k ø fas d ø jo:drø d set grø:doer la?'

'me z pø:s,' repø zo:zef, 'kø s ets pur i fer buji:r tō ju.'

benwa a be:se la tē:t, tu hō:tø.

¹ The author has frequently heard his father say *i*, even in public speaking, if he was at all excited.

istwa:r de be:ta

i j ave yn fwa ðe garsð ki ete tre stypid; oai ð ll aple be:ta. i n paise pa ðe gu:r sð fer omwë yn u dð be:ti:z.

ðe gu:r, sa me:r lqi di, 'be:ta, ty va ale a la fwa:r nuz aste ðe koðð. fwa:zi lœ bjë gru, e marðd lœ, pur ne pa l peje tro fe:r.'

'n e pa pœ:r, mðmð, ge fre atð:sjð, va.'

be:ta s ðva dð a la vil aste l koðð. i l fwa:zi bjë gru, i l marðd lð:tð pur ne pa l peje tro fe:r, epqi i lqi di, 'mðtnð koðð, swa bjë sa:z e va t ð a la me:zð sð t arste.'

le koðð repð par ðe gro:nmð 'xð', kom si i di:ze wi, e be:ta s ðva s promne dð la vil pur savwa:r sœ k i j ave d noef.

le swa:r, kðt il ari:v a la me:zð, i di a sa me:r, 'ebjë l koðð, il e bo ë?'

'u et i dð tð koðð?'

'esk i n e pa ðkor ari:ve?'

'komð ari:ve? ki dð es ki dve ll amne?'

'person, me g lqi ave di d et bjë sa:z e d veni:r isi tu drwa, sð s arete; e i m ave di k wi.'

'alð bð,' di la me:r, 'vwala not koðð perdy! ty n puve dð pa ll atafe par yn pat e l fase dvð twa avek yn baget?'

'yn ot fwa, mðmð, ge l fre.'

kek gu:r apre, la me:r l ðvwa a la vil aste ðe tre:pje pur met la marmit desy pur fer kqi:r la sup. be:ta s ðva a la vil, il ajet sð tre:pje, epqi i s rapel sœ ke sa me:r lqi ave di, k il ore dy atafe l koðð par yn pat, e l fase dvð lqi avek yn baget. il ataf dð sð tre:pje par ðe pje, e i s me a l tufe avek sð ba:tð pur le fe:r avðse. natyrelmð le tre:pje n buze pa, alo:r be:ta tap ply fo:r, epqi d plyz ð ply fo:r, e a la fë i kœ:s le tre:pje.

le vwala bjën ðnqi:je. i rð:tr a la me:zð, e i di a sa me:r, 'mðmð, ge fe kom ty m ave di, ge atafe l tre:pje

par yn pat, e g e ta:fe de l fase dvā mwa avak mō bo:tō.
me i n a po vuly marfe; alor g e tape ply for, e i s e
ka:se.'

'o: mō porv garsō! ty n ā fe game d ostr! ty n puve
po pō:dre le trepje derjer tō do, e l porte komsa?'

'yn ot fwa, māmā, gē l fre.'

ōe pō apre sa me:r lqi di,

'va a la vil nuz afte ōe pake d fū:del de sqif.'

i s ōva a la vil, il afet ōe pake d fū:del, e i s rapel s ke
sa me:r lqi ave di, k il ore dy porte l trepje derjer sō do.
i prō dō sō pake d fū:del, e i l pō derjer sō do.

gystemā s gur la i feze tre fo, e l sole:j done ā plē syr
le do d be:ta.

natyralmā, kāt il et arive a la me:zō, i n ave ply k le
mej derjer le do, e tu sez abi ete plē d gre:s.

'ke tū e dō stypid!' lqi di sa me:r, 'ty n se dō po k
le sqif fō tre fasilmā? oljō d le mestr o sole:j, i fale le
trōpe dā l o kā ty tru:ve ōe rjiso, u le fe:r rafre:fir par
le vā, kā ty ez ari:ve o ho d la ko:t.'

'yn ot fwa, māmā, gē l fre.'

kek gur apre, sa me:r l ōvwa a la vil afte dy sel pur
sale l nuvo ko:fō k ōn avet afte, e de plym pur fe:r ōn
edredō.

kā be:ta ari:v o ho d la ko:t, i s rapel ke sa me:r lqi
ave di k il ore dy fe:r rafre:fir se fū:del o vā. i s aret dō,
il u:vre sō sak de plym, e i lez etal bjē o vā. gystemā
s gur la, i j ave bo:ku d vā; e vwala tut le plym ki s
dvōl.

'bō' s di be:ta; 'g e dy fe:r yn be:ti:z. i fo ke g fas
bjēn atōsjō a mō sel mētnā; sō: sa g m ōva et grōde.'

e i rdesā la ko:t avek le sak de plym vid dāz yn mē,
e l sel dā l ostr. ōba d la ko:t, i j ave ōe rjiso.

'māmā m a di k g ore dy trōpe me fū:del dā l o' s
di be:ta; e i trō:p sō pake d sel dā l o.

ari:vā a la me:zō, i n ave po ply d sel

ke d plym. pur le ku sa me:r a perdy pasjō:s, e dpqi e n lqi a ply fe fe:r de komisjō.

A story from the province of Béarn, told by J. Passy.

le fval vole

Ô bra:v peizō n ave k ô fval pur labu:re sō fō. Ô zur
ô le lqi a vole.

le vwala bjē trist. kom s ete la se:zō de labu:r, i lqi fale apscelymō ô fval; e de l lōdmē, il e parti pur yn vil vwazin, u i j ave fwair o bestjo se zur la; il ô:portē yn petit som, tu l arzō k il ave a la me:zō, espe:rō k sa sy-fire pur aste ô:n ort feval.

arive a la fwair, i s me a rgarde le fvo ki etet a vō:dr. kel n e po sōn etonmō ô:n apersevō, parmi ô, sō propre fval! s e bjē lqi, i n se trōp po; la po:vre best a l e:r de le rkone:tr o:si.

zystemō ô:n azō d polis po:se. le peizō l apel: 'mōsjō,' lqi dit i, 'se fval ki e la et a mwa, ô m l a vole dō la nqi d avōjer a jer.' e kom le marfō d jovo s rekrie, 'zē n vuz akyz po,' dit i, 'me ptet ke l volœ:r vu ll a vō:dy jer?'

'vu vu trō:pe, mō brav ô:m,' repō l makinō avek asyrō:s; 'se fval resō:blē ptet bjē o vo:tr, me sa n pō po et lqi, kar zē ll e depqi trwa mwa; zē ll e aste a la fwair de jole, o mwa d zyje.'

l azō n save po a ki ô:tō:dr; ô:n atrupmō s forme de:za.

tutaku l peizō a yn ide. 'vuz ave se fval depqi trwa mwa, dit vu; alo:r vu l kone:se bjē. de kel œ:j esk i n i vwa po?' e ô mem tō i mete se mē syr lez jō dy fval.

le marfō ezit ô mōmō, pqi repō bra:vmd, 's e d l œ:j go:f.'

'me:sjə,' di l peizð ð dekuvrð l œj go:f de la be:t, 'vuz et temwē ke de st œj la le fval i vwa parfetmð.'

'he, s e la lð:g ki m a furfe,' di l makipð œ pø trouble, me pejd d o:das; 's e l œj drwa ke ʒ vule di:r; me:m ke ʒ l ore bjē vð:dy la smen dernje:r, si i n ave po ete borɲ, st animal la!'

'e bjē mētnð,' di l peizð ð dekuvrð l otr œj, 'ʒ n di:ra po k ty n e po œ mð:tœ:r e œ volœ:r. il i vwa bjē de døz jø, mð vjø nwa:ro, e ʒ espe:r k i n sra po borɲ de sito.'

i n j ave ply rjē a di:r. le makipð a ete ðmne ð pri:zð, e l peizð a py ravwa:r sð fval.

2. TEXT IN CAREFUL PRONUNCIATION

la mi:ze:r d œn ð:řð

s e dð set e'trwat e 'sð:bre 'ry d peri'gø, u nu dmœ:rjðz a'lo:r, ke ʒ devez epru:'ve l i'reparable ma'lo:r de ma 'vi.

notr aparte'mð kðsis'tet ðn yn ynɲk 'pjes e 'œ 'kabine 'nwa:r u ʒ ku'fs. nu n avjð 'ply su lez 'jø le 'larʒ ori'zð de l ɛpɑ:s sɛ'lwɪ. sɛlqi'si sɛ bɔr'net a la 'ku:r d œ marʃð d 'plð:f. su l 'ʒu:r 'tɛrn ki vne 'ta:r, s ðn ale 'to, notr ɛte'rjœ:r ete de ply 'trɪst. le 'fe:blɛ rɛ'surs ki nuz ete v'ny d œ 'tu ptit eri'ta:ʒ a'fve d s epqi:ze; o'dla, 'nyl espe'rð:s.

tu'ʒu:r ð teta'te:t avek ma 'me:r ðtre lez 'œ:r de 'klo:s, e'my d sez emor'sjð, la vwajðt ɛ'kjet ʒysk a n 'ʒame savwa:r la 've:ʒ kel sɛrɛ la nuri'ty:r dy lðd'mɛ, ʒø 'fre:mi-sez a l i'de d yn mi:ze:r ap'sɔly pur se dernje 'ʒu:r. nu 'rezervjðz ap'sɔlymð 'tu pur 'el.

ry de sɛ'pe:r, s ete pur 'mwa œ 'regal d avwa:r 'kalke le'gym œ 'pø asɛ:zɔ'ne; 'ry d peri'gø, sɛla m y sð:'ble l a'bð:dð:s dy 'ri:f.

e ɜ ave 'kē:z ð! 'l ɑ:ɜ u la krwɑ'sd:s rɑ'pid rɑ l
be'zwē d yn nuri'ty:r abō:dō:t plyz ē'perjə k a o'kōen
o:tre mɑ'mɑ d la 'vi.

le 'ply su'vɑ, ɜ par'te pur le kɑ'le:ɜ a 'ɜō, l estɑ'mɑ e
la 'tɑ:t 'vid. kɑ mɑ grɑ'mɑ:r vɑnɑ nu 'vwɑ:r, s ete le
'bō gur; ɛl m ð'rɪfɪs de kəlke p'tit mɑ'ne. ɜ 'kalkylɜz
ɑ'lɑ:r syr la 'rut sɑ kɑ ɜ pure 'bjēn ɑ'fɑt pur 'trō:pe mɑ
'fē. le ply 'sɑ:ɜ yt e'te d ð:tre fɑ l buld'ɜ; mɑ 'komɑ
trɑ'ɪr mɑ 'pɑ:vre'te ð 'mɑ:ɜd mɑ pē 'sek devɑ me kɑmɑ-
'rɑd? dɑ'vɑ:s, ɜ m vwɑ'ɜz ekspɑ:ze a lɑer 'rɪ:r, e ɜ ð
'fre:mɪs. sɑt 'ɑ:ɜ e 'sɑ pi'tje!

'ogur'dʒɪ, sɑt ēdɪ'ɜd:s 'ne d la pɜsekɪ'sjə, 'fje:rmɑ,
'nɒbləmɑ sypɔr'te pɑr le 'mjē, fɑ mɑ 'glwɑ:r. ɑ'lɑ:r, ɛl mɑ
'sɑ:blɛt yn 'hō:t, e ɜ la 'kɑfɑ de mɑ 'mjə. 'tɛrɪblɛ rɛs'pe
y'mē!

pur eɜ'pɑ o 'ru:ɜrɪ, ɜ ɪmɑɜ'ns d ɑ'fɑ kəlke'fɑ:z d ɑsɑ
'sɪpɑtɑ'sjəl pur mɑ sʊt'nɪr, e kɪ rɑð:'blɑ pur'tɑ a yn
frɪd'dɪ:z. le 'ply su'vɑ, s ete l pē d e'pɪs kɪ fɛzɑ le 'fre d
mɑ degɑ'ne. ɪ n 'mɑ:kɑ 'pɑ d bu'tɪk ð sɑ 'ɜdɪr syr mɑ
'smē. pur 'dø sʊ ðn ɑvɛt ɑ mɑr'so 'mɑpɪ'fɪk, ɑn ɑm
'sɪpɜrb, ɑ 'ɜd pɑr la hɑ'tɑer de la 'tɑ:ɜ; ð r'vɑ:f, ɪl ete
'sɪ plɑ, kɑ ɜ l gli'se dɑ mɑ kɑrtō, e ɪ n le 'gō:fle 'ge:r.

pɑdɑ la 'klɑ:s, kɑ ɜ sɑ'te le 'vɛrtɪ:ɜ mɑ sɑ:'zɪr e k mɛz
'jə vwɑjɑ 'trʊblɛ pɑr l e'fɑ d l ɪnɑnɪ'sjə, ɜ lʒɪ kɑ:'sɛz ɑ
'brɑ, yn 'ɜd:b, kɑ ɜ 'grɪnɑ'tɛz a la dɛrɑ'be. mɑ vwɑ'zē n
tɑrde 'ge:r a syr'prɑ:dre mɑ pti mɑ'ns:ɜ. 'kɑ 'mɑ:ɜ ty
'lɑ, mɑ dɪ:zɑ rɛ'vɔl u pɑ're? ɜ rɛpō:'de, nɑ sɑ 'ru:ɜrɪ,
'mɑ dɛ'sɑ:r.'

ð 'dɪ k le sʊ'frɑ:s fɪ'zɪk sɑ 'bɔn a 'l ɑ:m. ð 'vwɑ k ɜ
etɑ dɑ l e'tɑ le ply 'pɔpr a 'devlɑ'pe la 'mjɛn. mɛ l 'kɔ:r,
'lʒɪ, a ete 'dɛprɪ'mɑ. mɑl'gre lɛz ɑ'dʊsɪs'mɑ kɪ sɑ v'ny
ply 'tɑ:r, ɜ 'pɔrtɑ tu'ɜr sɑ 'tɑ ð 'mwɑ. mɑ 'tɑ:ɜ, ply
pɑ'tɪt kɑ 'sɑl dɛz ɑtre 'mɑ:bre de mɑ fɑ'mɪ:ɜ, yn mɑ:'grɔer
sɛɜɜ'ljɛ:r dɛz ɛkstremɪ'te, rɑ'pɛl kɑ mɔn ð'fɑ:s nɑ fy pwē
nʊ'rɪ. mɑ prɪvɑ'sjə pɑrv sɑ rɛzɪ'mɑ ð 'trwɑ mɑ: ɜysk

a 'kř:z ð, 'pwě d 'vjð:d, 'pwě d 'vē, 'pwě d 'fə. dy 'pě,
de le'gym le ply su'vð křiz a 'l o e o 'səl. si ʒ e syr-
ver'ky, 's e ke mal'gre le su'frð:s e la sð:'te rqi'ne de ma
'mair, la 'sen křstity'ajð de mð 'pə:r preva'lyt ð 'mwa. le
tra'vaj, lez abi'tyd de la 'vi səl'i'tair ke ʒ mənəz avak me
pa'rð, me su'tə:rt o:'si, me rð:'di:rt ak'tif, me 'sð me
forti'fje ʒa'mə. de 'sorte ke ma 'feti:v fi'gy:r 'reste kom
ð 'məny'mð de se tð d 'dœ:j. le sika'tris ke 'garde ma
mē 'drwot tə'mwaj de tð d i've:r pə:se sð 'fə. e spð:'dð,
parmi le 'ku e kř:trə'ku k ðen ð:'fð sð:'ble n pə pu'vwair
sy'por'te, ʒə res'te pur le 'vwair, e 'virvð pur le 'rakð:'te.

la 'fě n a pəz ete le 'səl tur'mð d mən ð:'fð:s. ʒə me
su'vjě syr'tu k ʒ e y 'frwə. nu n aly'mjð 'ʒame d 'fə dð
notrə grð:d 'fð:br, si s 'n e pur prepa're lez ali'mð, e kom
ð l a 'vy, sə n ete 'pə tu le 'ʒur nese'ser.

ð 'tut se:'zð, ʒə pərtəz ð pti't a'bi tet de 'nə:gr. par le
'tð d ʒə'le, i dœ'ne for 'sek. la 'bi:z me 'trðsper'se ʒysk
a la 'mwel dez 'ois. 'n ɛ:port, mal'gre l i've:r, les ð:ʒly:r
ki s etet u'vert e m feze 'kryelmð su'fri:r, ʒə m le've avð
l 'ʒur pur rə'li:r la 'volymi'nø:z istwar ð:'sajen de rə'lě.
ʒə m ð:'fð:se dð me 'fer:z e'tyd, i fer'fðt ðə sə'ku:r, es'pə:rðt
ubli'e. i m sð:'ble ke s etet a'neð:'ti:r la mi'zər ke d i
mwě sð:'ʒə.

JULES MICHELET.

3. TEXT IN VERY CAREFUL PRONUNCIATION.

komð djø forʒ yn a:m

dð la ful, sekretmð,

djø parfwa prðt yn a:m nœ:v

k il vøt amne lð:tmð

ʒyska lqi d eprœv ðn eprœ:v.

il la fe poivre, sđ sutjě,
dđ le rđz opaky:r retny,
jerřđ le vre, vulđ le bjě,
py:r tugu:r e mekony.

il fe plie su le dulœ:r
le fe:ble kœ:r ki ll đ:prizon;
il la nurit avek de ploer
ke nyl otr œ:m ne supœ:n.

il lqi sysit jak gu:r,
pur l epruve, yn o:tre pen;
il la fe suffri:r par l amu:r
par l ěgystis e par la he:n.

il la frap d œ ku sertě
dđ jakœ dez e:tre k el œ:m
e fe de sđ kryel destě
œ melđ:kolik proble:m.

game sa rigœ:r ne s đ:do:r;
l œ:m atđ la pe; il la trubl;
el lyt; il frap ply fo:r;
el se rezip, il redubl.

a la ryd lwo dy trava:j
il la kđdo:n, ě:si frape;
il la dyrsi kom l ema:j
il la trđ:p kom yn epe.

gy:ž ě:fleksibl, il vđ savwa:r
si gysk o bu, malgre l ora:ž,
el akđ:pli:ra sđ devwa:r
sđ demđ:ti:r se lđ kura:ž.

e s il la vwa, o darnje gu:r,
sđ ke sa fermete reklo:m,
il lqi surit avek amu:r;
set ě:si ke djđ forž yn œ:m.

EUGÈNE MANUEL.

la 'fwo¹

pur 'mwa, kǎ ʒ ve:'re, dǎ le se'leste 'plen,
 le'z astre s ekar'tǎ de loer 'rut ser'ten,
 dǎ le 'ʃǔ de l e'te:r l ǎ par 'l o:tre hoer'te,
 parku'ri:r o ha'za:r le 'sjǝz epuvǎ'te;
 kǎ ʒ ǎ:tǎ'dre ʒe:'mi:r e se 'bri:ze la 'te:r,
 kǎ ʒ ve:'re sǎ 'glob, er'rǎ e soli'te:r,
 flo'tǎ lwǎ de so'le:j, 'ploerǎ l ǝm de'trqi,
 se 'perdre dǎ le 'ʃǔ de l e'ternel 'nqi;
 e 'kǎ dernje te'mwǎ de se 'se:n fy'nebr,
 ǎ:tu:'re dy ka'o, de la 'mo:r de te'nebr,
 'soel ʒe sere de'bu; 'soel malgre mǝn e'frwa,
 'e:tr ǎ:fajibl e 'bǎ, ʒ esper'rez ǎ 'twa,
 e sser'tǎ dy rǎ'tu:r de l eter'nel ǎ'rǎ:r,
 syr le 'mǎ:d de'trqi ʒe l ǎtǎ'drez ǎ'ko:r!

LAMARTINE.

4. TEXT IN RAPID CONVERSATIONAL PRONUNCIATION¹

NOTE.—This pronunciation is not recommended for English students.

le'kol buiso'nje:r

la'se:n se'po:s syryn'plas dǎvi'la:ʒ. 'ʒǎ kili:'ze, a'si
 syrǎ'bǎ, se'le:v alari:ved'pje:r.

'ʒǎ aetesu'frǎ pǎndla'nqi, pask ilavemǎ:'ʒe trod'sri:z.
 samǎ'mǎ, kja'pǎe:r dǎlwarma'lad, a'di kini:re'po ale'kol.
 'bjǎ kinsufre'ply, iniva'po tut'me:m, 'paski'pureǎ'ko:r et-
 ma'lad.'

¹ This text is divided into stress-groups, which are approximately of equal length (§ 99), and the principal stress in each group is marked.

² In this text division into words is replaced by divisions into stress-groups, and the stress in each stress-group is marked.

'pje:r eteja:r'ged porteyn'lestr ovi'la:z wa'zē, meilarð:kš'trel destina'te:r osor'ti:r dəsōvi'la:z. in'va purtō'po ale'kol, 'paskid'vre eteyrla'rut dəsī'tri.' dy'rest, ilem'bjē:mjō pro-fi'te dsamati'ne pura'le dōlebwod'me:ri, paskiliko'ne ðe'ni.

se 'si:amy:zōd 'zwe avekleptizwa'zo kōna'denife! ōleza-ta'f parla'pat, ōlør'kup le'zel, ōle fe'so:te eferlakyl'byt ōle-pu'sō parla'kō. e'pi jarjēd'dro:l komdē'wa:r la'f:yroe:r dy'pe:r edla'me:r kōtintruv'ply lørpō'ti. li'de e'si sedtqi-'zō:t kē'zōn reziste'po ode'zi:r dakōpape'pje:r dəsōnspe-di'sjō. iva'dō purpo:zel'li:r kilir'ze.

kel 'bo: 'li:r di'pje:r.

'paselmā 'bo, ilto'si 'bjēnamy:'zō, e 'zystemā zōili'ze ynis'twa:r kilqido'ne la'f:erde'pul.

'kō:t la'mwa di'pje:r.

isa'zi dōe'ptigar'sō, 'zō:k, kōe'saltē:'bō:k ađl've ekilō:'men dōsawa'ty:r. lepti'zō:k pōs'bjē a'so:te parlapor'tje:r, mepur-plydsy:r'tel saltē:'bō:k laata'fe parla'pat komi'di.

la'pat!

lanqiv'ny, kōtutla'trup ago:pele'bwo esu'pe ōple'ne:r, lē'fef de'ta'f pti'zō:k el'fe de'sō:dr. mōgar'sō kilqi'di, zēbē-'zwē dōe'klun, iza'pel kom'sa...

jsē'bjē, ðe'gaja:r ki'fe deturde'fors e'port depwod'sō:ki'lo syrlēsto'ma.

'zyst. zedōb'zwē dōe'klun, kilqi'di, 'vy kelder'njek za've se'ko:sele'rē ōfzōl'so peri'jō; se'twa kilrō:plas'ra. mezse-'po ferle'so peri'jō kripti'zō:k kintjē'podytu aska:sele'rē. 'o:siz vatla'prō:d, re'pōl grōbri'gō; ſtepri'zōen es'pre, edi'si a'ðe:mwa tyso'ral me'tje. 'ðe:'mwa, sekrlipovpō'ti, mevuna-ledō'pom ram'ne amepa'rō? 'za'me rprōl'sele'ra dsagros'wa ð'rwe. a'lō:r gem 'so:vre dipti'zō:k.

kel 'berti:z! lore'dy 'file sō'rjē:di:r.

'o tytsō:'vra, bēōnōra'lōe:j syr'twa mō'go, ela'nqi 'tjē-twa'bjē setkazdē'fe:r?

yn'ka:z!

zid'fer'me mō'ljō ke'mo:r kommō'klun; 'tumezanimō

'mœ:r sta'ne; bēse'twak gime'tre tutle'nqi. ōna'tā:dā
tyvakmā:sel zegzer'sis, eda'bo:r tyvam'fē:r la'kylbyt.

lakyl'byt!

ela'tsy, ivul'fīd:k par'te:r, akat'pat, edōkut'pje ilqife'fē:r
ynkyl'byt, pqi'dō, pqi'trwo.

'a:!

me'kom isaper'swa klelō'fvō dypti'zō:k lē'zē:n, ilēlqi'kup
ōlqiōna'rafō 'mē:m ynpō'ne.

a'seō.

pānōstā:lal pe:rela'mē:r dypti'zō:k sōrve'ny ala'mē:zō,
ety'pū:s siūs'dezōle denportru'vel povpē'ti!

me 't:etwa'dō!

'keski'ja?

tynwadō'pō klis'twa:r ketymrakō:tla sela'no:tr? kes-
'brigōdsaltē'bō:k, se'mwa se'twa? kēlpōti'zō:k, sele'pō:v
tit'fo:vet kēnuvu'ljō 'v:ōle alērpa'rō purlezata'je parlē'pat,
lōera'rafe lē'plym, lē'forse aferlakyl'byt ele'met ā'ka:z?

se'vre; ziave'pō 'pū:se.

'zō, zē'ply ā:vi da'le ledeni'je!

'mwa nō:'ply.

nufē'rjō ptet'mjō dertur'ne ale'kol.

t:ō'plys kēge'vremō plymalo'vā:tr.

ekōtravajō'bje, nu'gōnrō p'te:t, aladistriby'sjō de'pri,
ō'bo:li:v kōm'sqid tō 'frē:r.

'alō ale'kol, mō'pje:r.

bra'tsy bra'tsu, pti'zō.

i'sort ā:ku'rō.

VERCONSIN,

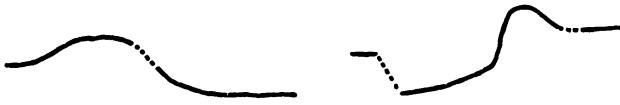
APPENDIX A

A TEXT WITH INFLECTIONS

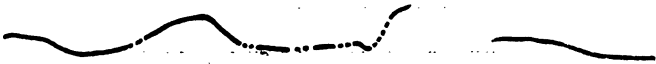
In the following text, which is taken from the *Grammaire* of Labiche, an attempt has been made to represent the inflections graphically by means of a curved line which rises and falls with the pitch. The text is written without punctuation marks and is divided into breath-groups. The curve of inflection ceases altogether between the breath-groups and is dotted when the sound of the voice ceases in the middle of a breath-group.

This text was prepared by the author assisted by Miss S. Lund and Mr. D. Jones.

msrwasi dētus ahyarivbjētar



zsvjēde kriurāsertifika - mwamem



kzmā lsvwasi zsvelmākeahlmā



4ynetepala ahupreforavwarsctletk



wimekzmā elēdālapzfdsvardēgzt



okelide mrijemafyaverurukus



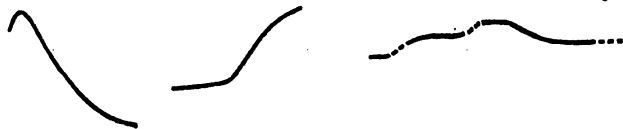
väländet wipurkwa kurevit



lazymāberjēd tēbedā kudsāārātrā



amšdja lazymā esmatēlavaf



APPENDIX B

DIFFERENT FRENCH PRONUNCIATIONS COMPARED

We give here for the sake of comparison a passage as pronounced in three different regions.

AS PRONOUNCED IN THE NORTH OF FRANCE.

yn mepri:s

œ zu:r œ peizð portet œ panje d pwa:r o ʃa:to d œ grð sɛpœ:r. il ari:v o ʃa:to, e syr l eskalje i rð:kõ:tre dð sɛ:ʒ ki etet abije kom dez ð:fð; me:m iz ave dð tre boz abi tu brode d ɔ:r avek œ ʃapo syr la tɛ:t e yn petit epe o kote.

le peizð, ð le vwajð, ɔ:t 'respektʊ:zmð sð ʃapo. vwala le sɛ:ʒ ki s aproʃ dy panje, — s e tre gurmð le sɛ:ʒ — e ki s met a prð:drø le pwa:r e a le mð:ʒe. le peizð n di rjɛ e s les prð:dr yn grð:d parti d se pwa:r. pɥi i mð:t ʃe l sɛpœ:r.

'mðsɛpœ:r,' lɥi dit i, 'vwala le pwa:r k ð m a komð:de.'

'e bjɛ,' di l sɛpœ:r, 'me tð panje et a mwatje vid; purkwa skø ty n l a pø rð:pli?'

'il ete bjɛ plɛ mðsɛpœ:r,' di l brav ɔm; 'me syr l eskalje ʒ e rð:kõ:tre vo dð fis; se me:sjð ð tru:ve le pwa:r a lær gu, e ʒ n e pø ɔ:ze lær refy:ze.'

AS PRONOUNCED IN THE SOUTH OF FRANCE.

yne meprise

œ gur œm peizdm portet œm panje d̄e pwar o fato d̄ œŋ gr̄d sepc̄er. il ariv o fato, e syr l eskalje i r̄n̄k̄ontre d̄œ s̄ẽz̄e ki etet abīf̄e kom dez ðf̄ð; mem iz ave d̄e tre boz abi tu brode d̄ or, avek œ japo syr la tet e yne p̄etit epe o kote.

le peizd̄, ð le vwajd̄, ote res̄petq̄œz̄em̄d̄ s̄õ japo. vwala le s̄ẽz̄e ki s̄ aprof̄e dy panje, — s̄ e tre gurm̄d̄ le s̄ẽz̄e — e ki se met a pr̄ũdre le pwar e a le m̄õz̄e. le peizd̄ ne di r̄j̄ẽ e se lese pr̄ũdr̄ yne gr̄ũde parti d̄e se pwar̄e. p̄uz i m̄õte f̄e le sepc̄er.

‘m̄õsepc̄er,’ l̄qi dit i, ‘vwala le pwar̄e k̄ õ m̄ a kom̄ũde.’

‘e bj̄ẽn,’ di le sepc̄er, ‘me t̄õm panje et a m̄watje vid̄e; purkwa ske ty n̄ l̄ a pa r̄ũpli?’

‘il ete bj̄ẽm pl̄ẽ m̄õsepc̄er,’ di l̄ brav om; ‘me syr l̄ eskalje z̄ e r̄n̄k̄ontre vo d̄œ fis; se mesj̄œ õn truve le pwar̄ez a l̄œr gu, e z̄e n̄ e paz oze l̄œr r̄efyze.’

AS PRONOUNCED IN FRENCH-SPEAKING SWITZERLAND.

yn mepri:z

œ gur̄ œ peiz̄a portet œ panje d̄ pwar̄ o f̄ato d̄ œ gr̄a sepc̄er. il ariv o f̄ato, e syr l̄ eskalje il r̄āk̄õ:tre d̄œ s̄ẽ:z̄ ki etet abīf̄e kom dez ã:f̄ã; mem ilz ave d̄e tre boz abi tu brode d̄ or, avek œ japo syr la tet e yn p̄etit epei o kote.

le peiz̄a, ã le vwaj̄ã, o:t res̄pektq̄œzm̄ã s̄õ japo. vwala le s̄ẽ:z̄ ki s̄ aprof̄e dy panje, — s̄ e tre gurm̄ã le s̄ẽ:z̄ — e ki s̄ mett̄ a pr̄ã:dr̄ le pwar̄ e a le m̄ã:z̄e. le peiz̄a n̄ di r̄j̄ẽ e s̄ les pr̄ã:dr̄ yn gr̄ã:d̄ partij̄ d̄e se pwar̄. p̄uz il m̄õte f̄e l̄ sepc̄er.

‘mōsepœ:r,’ lqi dit il, ‘vwala le pwo:r k ð m a komādei.’

‘e bjē,’ di l sepœ:r, ‘me tš panje et a mwatje vid; purkwa esk ty n l a po rā:pli?’

‘il ete bjē plē mōsepœ:r,’ di l brav om; ‘me syr l eskalje ʒ e rākōtre vo dø fis; se mesjō ð tru:ve le pwo:rz a lœr gu, e ʒ n e paz o:ze lœr rēfy:ze.’

APPENDIX C

FRENCH DIALECTS

The following texts are intended as an aid to those who wish to undertake the most interesting study of French dialects. A thorough theoretical and practical knowledge of phonetics and phonetic transcription is an absolute essential for those attempting work of this kind.

The text given here is the parable of the prodigal son in three different dialects.

1. DIALECT OF EZY SUR EURE.

j ave œn om k ave dø gu. e l py ʒœn de dø a di a sš pe:r, ‘papa, dœn mwe la po:r de bjē ci dwe me rveni.’ — e l pe:r lœz a fe l parta:ʒ de sš bjēi.

e cœk ʒu:r apre, l py ʒœn fis a tu ramc:se, epi il a parti dš œ peji elweje, u c il a tu mǎ:ʒe sš bjē a fe:r la nos. e kœt s e c il a y tu depǎ:se, vla c il e vny œn grœt famin dš s peji la, epi sa fe c il a kmǎ:se a e:t dš l bœzwēi. sa fe c il a ite s ōbo:ʒe ʒe œn om de s peji la, c i l a ōweje o šd ʒste le pursjo. e il œre ba vuly s rǎ:pli la mag de gus kœ le pursjo mǎ:ʒe; me s e k persone n j œn a dœne.

sa fe c il a dvipe ō lime:m, epi il a di, ‘kšba c j œn a d œm de ʒurne ʒe papa, k ð dy pē py c i n lœz ō fo, e mwe ʒ se: la a muri d fē! ʒ va me lve, epi ʒ va m

ŕnale truve papa, ba pi 3 i diire, "papa, 3 e peſe kŕtre l bŕ djŕ, e 3 t e fe de ſotiz; e 3e n vo py k ŕ m apel tŕ ſis; tret mwe kom ŕ d tez om de 3urnei." — e i s e: lve, e il a ite truve ſŕ peir.

ebŕ, dy:rŕ c il te ko lwŕi, vla k ſŕ peir l a vy, e ſa j a fe pice; e il a kury ſe 3te a ſŕ ku, e i l a ŕbrass. alo:r le ſis j a di, 'papa, 3 e peſe kŕtre l bŕ djŕ e 3 t e fe de ſotiz; 3e n vo py k ŕ m apel tŕ ſis.' — me l peir a di a ſe 3ŕ, 'aporte weir la py bel rob e mste ji; e mste ji ſen bag o dwe e de ſuje o pje; e amne l vjo gru e tpe lŕ; e mŕ:3ŕ e regalŕ nu; paake mŕ ga ke vla ete moir, e le vla rveny a la vi; il te perdy, e le vla rtruve.' — e il ŕ kmŕ:se a lŕ regale.

2. DIALECT OF THE VAL D'AJOL (Vosges).

in om eva du fe. epŕ le py 3jem da: du dhe e s peir, 'papa, beja me le pa: d bje ke me rvje.' — e l peir laz i pte3e s bje.

epŕ dutro 3une: epra, le py 3jen fe, kŕt el ſvy to ramessa, e patje: fjŕ dŕ i pei bje lŕ; e pwa la e diſipe s bje e far le nos. epŕ kŕt el o to depŕ:se, e vne ſn gros famin dŕ l pei la; e el e kmŕ:se d e:t dŕ l bezŕ. e e s ŕnale s ŕ:bo:ſe ſe in om di pei la; e ly l ſvuje dŕ ſa: ſŕ wad3a la: pwo. e el ora bje vly s rŕ:pli l vŕt devo la: paly:r ke la: pwo me:3i; ma: pwo3en ne li ŕ beja pwŕ.

alo:r el e rveny e lymam, epŕ e ſŕ:3e, 'kobje d om de 3une: ſy m peir ŕ di pŕ py k e n laz j ŕ fo:, e mi toſi i kroeva d fŕ! i m lŕvra:, epŕ i vira wer me peir, e i li dirar, "papa, i a peſe kŕt le ſjel e kŕtre vo; i n so: py dip k ŕ me rkenxe:s pu vot fe; treta me kmŕ i d vo domestik." — e e s lŕve, e e s ŕnale wer ſe peir.

e ditŕ k el eta kwa bje lŕ, ſe peir le vy, epŕ e fŕ tuſe d kŕpasjŕ; e e kure, e e s 3te e s ko:, epŕ e l biſe. ma: l fe ji dhe, 'papa, i a peſe kŕt le ſjel e kŕtre vo; i n so: py dip k ŕ me rkenxe:s po vot fe.' — ma: l peir dhe e

so: zǎ, 'aputǎ le py bal kot epø botaz i; epø botaz i en boik i do epø da: sule: a: pje; e mwana tosi l ve: gru, e cǎa le; epø me:zǎ e emyzǎ no; paske m fe ke wala tola eta mo:, epø el o revika; el eta pødzy, epø el o rtrova.' — e e kmǎ:se:r de s emyza.

8. DIALECT OF ARRETTE-EN-AZUN, HAUTES-PYRÉNÉES.

ŷ 'omi k aje dys 'if. e m mez 'gwen dez 'dys ke difu a su pał, 'pał, 'dam m era le'gitima ki s en 'toka. e p pał k uz espar'ti b 'bē.

e 'pod de 'dias des'pyf, a'kem me gwen 'hi ke s 'ag aplege 'tut, e ke s en a'ne ta ŷ pa'is e'raūt, un despen'se z 'bēs em bi'ben en salu'pe.

e kan o tud despen'sat, ya 'grana 'hami ke syz'biu en a'kep pa'is, e ke komen'se a j es'te m be'zun. e ke s a'ne a'ry'ma dab 'ŷ d a'kep pa'is, ki l embi'e ta səs 'kans pur'ke. e k a'ie 'plā bu'lyt har'ta se d en ne'dei ki s por min'jaban, mez ar'reh nū ne 'daba.

e ke s pen'se n em ma'dej, 'kontez bał'lets en 'so de 'pał an ep 'pā tante ne 'bos tante ke n 'as, e 'ju a'si ke 'krebe de 'hami! — k en Ae'bere, k a'ne de 'kab a pał, e k u dize'iei, "'pał, k ei pe'kat kunt'ia t 'seū e kunt'ia 'bus, e nū soł mez 'dinne de j est ape'rad eb boste hi; trat'tam me kum ad 'ŷ dez bostez bał'lets.'" — e ke z Ae'be, e k a'ne de 'kab a su 'pał.

e kum a jer en'kora n 'na, su pał k u 'bi, e ke s engurgu'si; e k u kur'ru a k 'kot, e k u py'ne. et 'hi k u di'fu, 'pał, k ei pe'kat kunt'ia t 'seū e kunt'ia 'bus, e nū soł mez 'dinne de jest ape'rad eb boste 'hi.' — mez ep 'pał ke di'fu a s soz bał'lets, 'pur'tad era mez 'bera 'pefa e bes'tillune; hi'kallu ya 'berga n 'dit e ŷ kaū'se s 'pes; āmi'ad eb be'ted apes'tat, e aū'sillu; e min'jem e arri'gam, per'mū k em me 'hi ki 'bet, ke jera 'mur, e ke s e rebisku'lat; ke jera per'dyt, e ke s e t'ru'bat.'

APPENDIX D

AN ATTEMPT AT THE RECONSTRUCTION OF OLD FRENCH PRONUNCIATIONS

1. A FABLE OF LAFONTAINE.

le savetje e le findaje

œ savetje ſântwe dy matē zysk o swe:r;
s etwe mervæſe de le vwe:r,
mervæſe de l ui; i fozwe de pa:sa:ʒe,
ply kōntāſ k okœn de se sa:ʒe.
sō vwezē, o kōtre:r, etā tu kuzy d o:r,
ſântwe pø, dōrmwe mwēz ōſko:r;
s etwet œn ſme de findi:se.
si sy le pwēn dy zu:r parfwēz i sōmæſwe,
le savetje alo:r ā ſântā l eveſwe,
e le findi:sje se pleſwe
ke le swēn de la providō:se
n yse poz o marſe fe vōndre le dōrmi,
kōme le mōʒe e le bwe:r.
ā sōn otel i fe vœni
le ſântø, e lqi di, 'or sa, si:rø gregwe:rø,
ke gēne vu par ā? — par ā? ma fwe, mœsjø,
dit avek œn tōn de riø
le gaſa:r savetje, se n e pwēm ma manje:rø
de kōnte de la sort, e ʒe n āntose ge:r
œ zu:r sy l o:tr; i syfi k a la fē
ʒ atrape le bu de l anei;
jake zu:r amene sōm pē. —
e bjē! ke gēne vu, dite mwe, pa gurnei? —
tānto ply, tānto mwē; le mal e ke tugu:r
(e sō sela no gē sœrwēnt asez onetø),
le mal e ke dā l ā s āntre:me:le de zu:r

k i fo jo:me; ſ nu ryin ſ fe:te;
 l yne fe to:r a l otr; e me:ſjə le kyre
 de ke:ke nuvo sſ farge tugu sſm pro:ne.
 le finđ:sje, riđn de sa naivete,
 lqi di, 'ge vu vø metr ogudqi sy le tro:ne.
 prene se sſnt eky; garde lez ave swē
 pur vuz ſ sarvi o bezwē.
 le savetje kry vwe:r tu l aržđn ke la ter
 avwe, depqi ply de sſnt ſ
 prodqi pu l yza:ge de gđ.
 i returne je lqi; dđ sa ka:v il đsere
 l aržđ, e sa gwa:j a la fwe.
 ply de ſđ; i perdi la vwe
 dy momđn k i gđpa se ki ko:ze no pēne.
 le sſmeđ kita sſ logi;
 il y pur o:te le susi,
 le supsđ, lez alarme vēne.
 tu le gu:r il avwe l ođ o ge; e la nqi,
 si ke:ke ſa fezwe dy brqi,
 le ſa prenwe l aržđ. — a la fē le po:vr đme
 s đn kury ſe sſlqi k i ne reveđwe ply:
 'rānde mwe, lqi dit i, me ſđsōz e mđ sſm,
 e reprene vo sſnt eky.'

2. A SONNET BY CHARLES D'ORLÉANS.

(Fifteenth century.)

le tǎnz a le:se sſm mǎnteco
 de vǎn, de fruedy:r e de plyie,
 e s e: vety de broderie,
 de soles lyizǎn, kler e beoo.
 i n i a be:te, ne wezeoo,
 k ǎn sſn zargōn ne ſǎnt u krie,
 le tǎnz a le:se sſm mǎnteco
 de vǎn, de fruedy:r e de plyie.

8. A PORTION OF THE CHANSON DE ROLAND.

(Verse 1424 and the following.)

ɛ̃n 'frā̃nts ɛ̃n 'a:θ mult mervei'ʎous tur'mě̃nt ;
 o're:ts i 'a:θ de to'neiðr e de 'vē̃nt,
 'plỹ e grə'zildz dezme'zy:rəðemě̃nt :
 'kɛ̃ʃent i 'folldrez e me'ny:θ e su'vē̃nt,
 e 'terre'myete tʃo i 'a:θ veire'mě̃nt ;
 de 'sā̃int mi'kɛ̃l del pe'riɑ dʒyak as 'sā̃inta,
 'dez beʒen'tsɔ̃n tɹeak as 'pɔrdz de gwit'sā̃nt,
 nɛ̃n 'a:θ rə'tseθ dɔ̃nt li 'my:rz nɛ̃ kre'vā̃nt ;
 'kɔ̃ntre mi'di: te'ne:bɹez i aθ 'grā̃nts,
 n i 'aθ klar'te:θ se li 'tʃɛ̃lz nɛ̃ i 'fě̃nt.
 'ɔ̃m nɛ̃ lo 'vẽlt ki nɛ̃ s 'ɛ̃n espa'vē̃nt ;
 'di:ent ply'zour, 'tʃo st li de'finemě̃nts,
 la 'fi:n del 'sɛ̃kle ki nuz 'est ɛ̃m pre'zā̃nt !'
 'mẽlz il nɛ̃ l 'se:vent, nɛ̃ diend 'vẽir nɛ̃'lě̃nt :
 'tʃo st li grā̃ndz 'dyels pur la 'mɔrd de rəθ'lā̃nt.

APPENDIX E

ORTHOEPICAL RULES

We add here a few rules for determining in what cases the various sounds described in this book are to be used. The pronunciation given is that of the author, normalized in a few cases ; other pronunciations are sometimes given in notes.

1. The vowels o-o, a-a, e-e, ø-œ.

Generally speaking o, a, e, ø occur in open, and ɔ, ɑ, ɛ, œ in closed syllables.

The vowels o, ɔ.

The vowel is pronounced o :

(i) whenever it is final, thus : *mot* mo, *beau* bo, *chaud* fo, *gros* gro, *galop* galo ; *trop* tro is an exception, and is thus distinguished from *trot* tro¹ ;

(ii) in the termination -ose, as : *rose* ro:z, *chose* fo:z, and generally before the sound z, thus : *roseau* ro:zo, *groseille* gro:zɛj² ; exceptions, *philosophe* filo:zɔf, *myosotis* mjo:zoti:s, *losange* lo:zɛ:g, *cosaque* ko:zak, *Lausanne* lo:zan ;

(iii) in the words *zône* zo:n, *grosse* gro:s (feminine of *gros* ; *grosse* meaning twelve dozen is *gros*), *dosse* do:s, *odieux* o:djɔ, *Vosges* vo:g³ ;

(iv) when the usual spelling has ô, œ, au, eau, except in the cases noted below, thus : *côte* ko:t, *Saône* so:n, *sauce* so:s, *sauf* so:f, *autel* o:tel,⁴ *Beaune* bo:n.

The vowel is pronounced ɔ :

(i) when the usual spelling has o in cases other than those mentioned above, thus : *note* not, *pomme* pɔm, *bosse* bɔs ;

(ii) when *au* is followed by *r*, thus : *j'aurai* go:re, *je saurai* ʒe so:re, *Laure* lo:r, *centaure* sɛ:to:r⁵ ;

(iii) in the words *trop* tro, *aumône* o:mon, *hôtel* o:tel, *rôti* ro:ti, *mauvais* mo:vɛ, *Paul* po:l, *Auch* ɔ:f, *Auxerre* ɔ:sɛ:r⁶ ;

The vowels a, ɛ.

The vowel is pronounced a :

(i) almost always in the group -roi-, thus : *froid* frwa,

¹ In the east of France and in French-speaking Switzerland words ending in -ot, -op are pronounced with o : thus *mot*, *pot*, *so:t*, *canot* mo, po, &c., are distinguished from *maux*, *peau*, *saut*, *canaux* mo, po, &c.—In Paris the word *trop* is often pronounced tro, like *trot*.

² Also ro:zo, gro:zɛj.

³ Also o:dʒ, vo:g.

⁴ Also so:f, o:tel.

⁵ Also in many parts of the country go:re, ʒe so:re, lo:r ; similarly *encore* ɛ:ko:r ;—but *corps* ko:r.

⁶ Also tro, o:mon or o:mo:n, o:tel, &c.

croire krwa:r, *étroite* etrwat ;—exceptions, *miroir* mirwa:r, *terroir* terwa:r, *tiroir* tirwa:r, and names of peoples like *Hongrois* hō:grwa, *Bavarois* bavarwa¹ ;

(ii) in the terminations :

-as : *pas* pa, *ras* ra ;—exception *bras* bra ;

-ase : *case* ka:s, *base* ba:s ;

-azon : *gazon* ga:zō, *blason* bla:sō ;—exception *diapason* djapazō ;

-aille : *bataille* bataij, *Versailles* versa:ij ;—exception *médaille* meda:ij, and a few verbs, as *je travaille* ge trava:ij ;

-afre : *kafre* ka:fr ;

-ation, -assion : *nation* na:ajō, *passion* pa:ajō² ;

-oie : *soie* swa, *voie* vwa (substantive, but *que je voie* ke ge vwa:ij or ke ge vwa) ;

(iii) when the usual spelling has *â* : *mât* ma, *pâte* pa:t, *âpre* a:pr ; except in verbal terminations as : *nous mangeâmes* nu mǎ:gam ;

(iv) in the words *climat* kli:ma, *casse* ka:s, *classe* kla:s, *espace* espa:s, *nasse* na:s, *tasse* ta:s, *maçon* ma:sō, *diable* dja:bl, *fable* fa:bl, *sable* sa:bl, *accabler* aka:ble, *sabre* sa:br, *délabrer* dela:bre, *cadavre* kada:vr, *navrer* na:vre, *miracle* mira:kl, *oracle* ora:kl, *esclave* eskla:v, *cadre* ka:dr, *flamme* fla:m, *Jeanne* ga:n,³ *dammer* da:ne, *gagner* ga:ne,³ *jadis* ga:dis, *haillon* hajō, *graillon* gra:jō, *poulailler* pula:je, *du bois* dy bwa, *mois* mwa, *noix* nwa, *pois*, *poix*, *poids* pwa, *toit* twa, *foi* fwa, *poêle* pwa:l⁴ ;

(v) generally in words derived from the preceding, thus : *passer* pa:se, *tailleur* ta:jœ:r, *enflammer* ǎ:fla:me, *noisette* nwa:zet ; there are, however, exceptions, as : *casanier* kaza:ne, *fracasser* fra:ka:se, *embarrasser* ǎ:ba:ra:se, *affreux* afrœ, *Jeannette* ga:net, *maillot* ma:jo, *poisser* pwase, *boisé* bwa:ze.

¹ Some Parisians say nwa.

² At Lyons na:ajō, animasajō, &c.

³ Also gan, gane.

⁴ Also twa, fwa, lwa, vwa, and sometimes pwal.

The vowel is pronounced *a* in all other cases, whether it be written *a*, thus: *rat* ra, *masse* mas, *table* tabl, *nacre* nakr, *bail* ba:j;—or *ε*, thus: *femme* fam, *hennir* hanir, *solennel* solanɛl, *indemnité* ɛ:damnitɛ, *prudemment* prydamɛ;—or *i*, thus: *poil* pwal, *oiseau* waso, *fois* fwa, *je bois* ʒe bwa, *moi* mwa, *toi* twa.

The vowels *ε*, *e*.

The vowel is pronounced *ε*:

(i) in all closed syllables, thus: *ferme* ferm, *raide* red, *Ernest* ɛrnest; except when it is written *é*;

(ii) when it is written *è* or *ê*: *très* trɛ, *près* prɛ, *forêt* forɛ;

(iii) in the terminations *-et*, *-ect*: *baquet* bakɛ, *respect* rɛspɛ;

(iv) in the verbal forms: *tu es* ty ɛ, *il est* il ɛ;

(v) in the terminations *-aid*, *-ais*, *-ait*: *laid* lɛ, *marais* marɛ, *je vais* ʒe vɛ,¹ *j'aurais* ʒorɛ, *lait* lɛ; with certain exceptions mentioned below;

(vi) in the terminations *-ai*, *-ay*, *-aie*, *-aye*: *vrai* vrɛ, *Fontenay* fɔ:tɛnɛ, *haie* hɛ,² *je paye* ʒe pɛ:j, *j'essaye* ʒ ɛsɛ:j³;

(vii) in the verbal terminations *-ayer*, *-eyer*, *-eiller*: *payer* pɛje, *essayer* ɛsɛje, *sommeiller* somɛje.

The vowel is pronounced *e*:

(i) when it is written *é*: *été* ɛtɛ; even when the syllable has become closed by reason of some contraction, as: *élever* ɛlvɛ;

(ii) when it is written *e* followed by a final mute consonant other than *t*, thus: *nez* nɛ, *pied* pjɛ, *parler* parlɛ;—exception *tu es* ty ɛ;

(iii) in the verbal termination *-ai*, thus: *j'ai* ʒɛ, *j'aurai* ʒorɛ, *je mangeai* ʒɛ mɔ:ʒɛ;

¹ Or *ge vɛ*, or *ʒe vɛ*.

² In French-speaking Switzerland ɛ:j.

³ Also *ʒe pɛ*, *ʒɛsɛ*.

(iv) in the words *et e*, *quai ke*, *gai ge*, *geai ge*, *je sais*, *tu sais*, *il sait se*, *je fais*, *tu fais*, *il fait fe*¹;

(v) when it is written *æ* or *æ*, as : *Mæris me:ri:s*.

In the syllable preceding the stressed syllable the vowel sound is often intermediate and variable, thus : *féroce fêros*, *fêros*, or *feros*. The author pronounces *me:zõ*, *ple:zi:r*, *re:zẽ* but *re:zõ*.

The vowels *œ*, *ø*.

The vowel is pronounced *ø* :

(i) always when final, thus : *jeu zø*, *cieux sjø*, *queue kø* ;—except in the weak form of *neuf*, thus : *neuf personnes nœ* person² ; and in *le* when stressed which becomes *lœ* or *lø*, as : *dis-le dilœ*, or *dilø* ;

(ii) when it is written *eû* as in *jeûne zø:n*³ ;—except the verbal forms *qu'il eût k il y*, &c. ;

(iii) in the terminations *-euse*, *-eute*, *-eude*, thus : *creuse krø:z*, *meute mœ:t*, *leude lœ:d* ;

(iv) in the words *meule* (haystack) *mø:l*,⁴ *jeudi zø:di* ;

(v) generally in words derived from the preceding, as : *queuter kœ:te*, *ameuter amœ:te*, *creuser krø:ze*.

In other cases the vowel is *œ*, thus : *beurre bœ:r*, *heure œ:r*, *feuille fœ:j*, *fleuve flœ:v*,⁵ *Neuilly nœji*.

Note that the *e* in *gageure gagy:r* merely indicates that the *g* is pronounced *g*. The pronunciation *gagœ:r* is also heard, but is considered incorrect.

¹ Also *ke*, *ge*, *se*, *fe*.

² Also *nœf* person.

³ Also *gœ:n*, sometimes *gœn*.

⁴ Also *mœ:l*.—The distinction made by the author between *mœ:l* (haystack) and *mœ:l* [mill-stone] is not by any means universal. In most dialects the distinction exists though sometimes in another form : thus in the neighbourhood of Mantes they are *myl* and *mœ:l* respectively.

⁵ Many dialects, including those to the West of Paris and of French-speaking Switzerland, have *ø* in words like *heure ø:r*, *fleuve flø:v*. The Swiss distinguish *seul œ:l* from *seule sœ:l*.

Length of Vowels

The rules of length are fixed except for the case of one of the vowels u, o, a, ɔ, ɛ, i, œ, y followed by a consonant other than a final voiced fricative or r. In these positions the length varies.

The vowels o, i, y.

These vowels are almost always short in the positions with which we are dealing. The author pronounces them long in Greek and Latin words such as *Minos* mi:nɔ:s, *Agis* aʒi:s, *Brutus* bry:ty:s, but they are just as frequently pronounced short as long in this case.

The vowels u, a, œ.

These vowels are nearly always short. u is long in *couler* ku:le, *rouler* ru:le and in the pronoun *tous* tu:s, which is thus distinguished from *tousse* tus.—a is long in *une boîte* yn bwa:t, thus distinguished from *il boîte* i(l)bwa:t.—œ is long in *veule* vœ:l, thus distinguished from *ils veulent* i(l)vœl.¹

The vowel ɔ.

ɔ is long in strong closed syllables except in the words *droite* drwat, *étroite* etrwat, *adroite* adrwat, *froide* frwad, *froisse* frwas, *paroisse* parwas.

The vowel ɛ.

ɛ is long :

(i) in the terminations -ès, -aisse, thus : *Thalès* tale:s, *palmarès* palmare:s, *baisse* be:s, *caisse* ke:s, *graisse* gre:s² ;

(ii) in the terminations -ème, -aime, thus : *thème* te:m, *j'aime* ʒe:m ; exceptions, *sème* sem,³ and the numerals *deuxième* dø:ʒjem, &c. ;

(iii) in the termination -ène or -êne : *pène* pe:n, *scène* se:n ; exception, *Hélène* elen ;

(iv) in the termination -aison : *raison* re:zõ, *combinaison* kõ:bine:zõ ;

¹ Also vœ:l. Some pronounce *jeûne* ʒœ:n instead of ʒœ:n.

² Or gras.

³ Dialectal sym.

(v) when it is written *ê, ai, es, ais*: *grêle gre:l, maître me:tr, Nesles ne:l, Aisne e:n*; except in *arrêter arête*,¹ *Guesde ged*;

(vi) in the words *aigre e:gr, nègre ne:gr, cèdre se:dr, Phèdre fe:dr, aine e:n, gaine ge:n, haine he:n, Maine me:n, reine re:n, veine ve:n, Seine se:n, Beynes be:n, cesse se:s, presse pre:s, est-ce e:s, Grèce gre:s*,² *aide e:d, poète po:e:t, traiter tre:t, traite tre:t*,³ *la greffe la gre:f*⁴;

(vii) generally in words derived from the preceding: *caissier ke:sje, aigreur e:gre:r, traité tre:t*.

Otherwise the vowel is short: *laine len, peine pen, messe mes, pièce pjes, cède sed, raide red, achète ajet, défaite defet*.

A good many words are distinguished by the length of *e*.
Examples:

*peine pen*⁵
renne ren
*saine sen*⁵
*vaine ven*⁵
*laine len*⁵
sème(nt) sem
belle bel
Melle mel
tête(nt) tet
bette bet
traite tret
faite fet
*mètre, mettre metr*⁶
lettre letr
cède(nt) sed
*laide led*⁷
paresse pares
herbette erbet

pène pe:n
reine, rène re:n
scène, Seine se:n
veine ve:n
l'aine, l'Aisne le:n
s'aime(nt) se:m
bêlé(nt) be:l
mêlé(nt) me:l
tête te:t
bête be:t
traite(nt) tre:t
faite, fête, fe:t
maître me:tr
l'être le:tr
s'aide(nt) se:d
l'aident le:d
paraissent par:s
air bête e:r be:t

¹ Popularly *arte*.

² Or *grez*.

³ In its commercial sense, usually with reference to slaves, whence *trètô, trètœ:r*. But *vingt lieues d'une traite vɛ lʒ d yn trèt*; *une traite sur . . . yn trèt syr . . .*

⁴ But *le greffe le gref*.

⁵ Also *le:n, pe:n, sem, ven*.

⁶ *Mètre* is also pronounced *me:tr*.

⁷ Or *le:d*.

APPENDIX F

SPECIMEN OF FRENCH PHONETIC
WRITING¹

lə so:lɛ:j di, ʒə m apɛl so:lɛ:j. ʒə sɥi trɛ bri:jð. ʒə m
lə:v a l ɛst, ɛ kɑ ʒə m lə:v, i fɛ ʒu:r. ʒə rɡardɛ par ta
fɛnɛ:tr avɛk mɑ̃n œ:j bri:jð kɑm l ɔ:r, ɛ ʒ tɛ di kɑ̃t il ɛ tɑ̃
d tɛ lve; ɛ ʒ tɛ di, paʁɛsø, lɛv twa; ʒə n bri:j pɑ pur
kɛ ty rest o li a dɔrmir, mɛ ʒə bri:j pur kɛ ty t lə:v ɛ
k ty trava:j, kɛ ty li:z ɛ k ty t prɔmɛn.

ʒə sɥiz œ grɛ vwajazœ:r. ʒə vwaja:ʒ dɑ tu l sʒɛl; ʒə n
m arɛt ʒamɛ, ɛ ʒə n sɥi ʒamɛ fatigɛ. ʒ ɛ yn kurɔn syr
la tɛ:t, yn kurɔn dɛ rɛjð bri:jð, ɛ ʒ ɑ:vwa mɛ rɛjð partu.
ʒə bri:j syr lɛz arbr, syr lɛ mɛ:zð, syr l o; ɛ tut a l ɛ:r
rɛlqi:zð ɛ ʒœli kɑ ʒ bri:j dɛsy.

¹ The following are the cursive forms used in writing French phonetically; all the other letters are the same as in ordinary handwriting.

ɲ	<i>ɲ</i>	ʃ	<i>f</i>	ø	<i>œ</i>	ɛ	<i>ɛ</i>
ɛ	<i>ɛ</i>	ʒ	<i>z</i>	ə	<i>ɜ</i>	ɑ	<i>ɑ</i>
R	<i>ɹ</i>	z	<i>z</i>	ɔ	<i>ɔ</i>	a	<i>a</i>
ʁ	<i>ʁ</i>	ɥ	<i>ɥ</i>	œ	<i>œ</i>	:	<i>~</i>

Is orley di, zo m apel
 orley. zo syr tre brijā. zo m
 lew a l est, e kā z mo lew,
 i fe zur. zo regards par ta
 fneht avet mīn aij brijā ksm
 l 2r, e z to di kāt il e tā
 d to lve; e z to di, "parcso,
 lev twa; zo n brij pa pur ko
 ty rest o li a dsmir, me zo
 brij pur ko ty t lew e k ty
 travaj, ko ty lix e k ty t prs:
 men."

zo syix ā grā vwajazær.
 zo vwajaz dā tu l sjel; zo n
 m aret zame, e zo n syr zame
 fatige. z e yn kurn syr la
 test, yn kurn do rejz brijā,
 e z ārwa me rejz partu. zo
 brij syr lex arbr, syr le mexi,
 syr l o; e tut a lex rolyuxā
 e zaeli kā z brij droy.

**ENGLISH AND FRENCH READERS IN THE
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